BEST EXPORT MARKETS

FOR

U.S. MEDICAL EQUIPMENT AND SUPPLIES, 2003

Best Export Markets for U.S Medical Equipment and Supplies was compiled by Oya Birankur, under the supervision of Maurice Kogon, Director of the El Camino College Center for International Trade Development (CITD) in Hawthorne, California. The report is based largely on 2003 Country Commercial Guides (CCGs) prepared by United States Commercial Service (USCS) posts abroad. All those CCGs include a standard chapter "Leading Sector for U.S. Exports." This report drew from those CCGs which specifically recommended Medical Equipment as a best prospect for U.S. exports, based on near-term growth potential or a large market receptive to additional U.S. suppliers.

The entire report is also available as a Word document, in print or electronically, for $25.00. To order, contact the El Camino College CITD at: 310-973-3173 or **mkogon@elcamino.edu**.

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I. EXPORT MARKET OVERVIEW

HS 9018: U.S Medical, Surgical, Dental and Veterinary Instruments and Appliances (Including Electro-Medical and Sight-Testing) & Parts

This Product Market Brief provides an overview of the world market for U.S. Medical, Surgical, Dental and Veterinary equipment based on an analysis of the latest available trade statistics and market research.

Export Growth: U.S exports of U.S. Medical, Surgical, Dental and Veterinary equipment rose from $8.1 billion in 1998 to $10 billion in 2002, an increase of 23% over the four-year period.

Leading Foreign Markets: The leading markets for U.S. Medical, Surgical, Dental and Veterinary equipment in 2002 (all valued above $480 million) were: Japan (15% of total); Germany (11%); Netherlands (10%); Canada (8%); Mexico (7%); United Kingdom (5%) and France (5%). Other major markets (above $205 million) were: Belgium (3%); Australia (3%); Italy (3%); Ireland (2%); China (2%) and Korea (2%).

Fastest Growing Markets: Of the major, large-volume markets, those-showing-the highest four-year growth rates for U.S. Medical, Surgical, Dental and Veterinary equipment (1998-2002) were: Korea (148%); China (133%); Mexico (85%); Ireland (55%); Italy (37%); Germany (36%); Netherlands (36%); Canada (24%); United Kingdom (20%); Australia (19%); Belgium (17%) and Japan (12%). Other (smaller-volume) high-growth markets over the four-year period were: Denmark (40%); Greece (19%); Israel (18%); India (16%); and Korea (12%).

Declining Markets: Of the major, large volume markets, France was the only country that showed the lowest four-year growth rate for U.S Medical, Surgical, Dental and Veterinary equipment (1998-2002): (-14%).

U.S. Market Share: The U.S. held a 33% share of the world market for Medical Equipment, in 2001 (based on the latest available United Nations data). This compared with a 29% share in 1997, for a gain of 4 percentage points during the 1997-2001 period.

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of Medical, Surgical, Dental and Veterinary equipment over the next two years. Specific U.S. export statistics on Medical Equipment are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to relevant trade contacts, trade opportunities and market research on each country.

Argentina	Finland	Malta	Spain
Australia	France	Mauritius	Sri Lanka
Austria	Germany	Moldova	Sweden
Bahrain	Greece	Netherlands	Switzerland
Botswana	Haiti	New Zealand	Syria
Brazil	Hong Kong	Nigeria	Taiwan
Bulgaria	Hungary	Norway	Thailand
Cambodia	India	Oman	Turkey
Canada	Indonesia	Peru	Turkmenistan
Chad	Ireland	Philippines	Ukraine
Chile	Israel	Poland	UAE
Colombia	Italy	Portugal	UK
Croatia	Jordan	Romania	Vietnam
Cyprus	Kazakhstan	Russia	Yemen
Ecuador	Kuwait	Saudi Arabia	
Egypt	Lebanon	Singapore	
Eritrea	Malaysia	South Korea	

II. MARKET POTENTIAL INDICATORS

A. U.S. EXPORT STATISTICS

Top 30 U.S. Export Markets 1998 - 2002
(Values in $ Thousands)
HTS 9018 _ Surgical, Dental and Veterinary Instruments and Appliances (Including Electro Medical and Sight-Testing) & Parts

Country	1998	1999	2000	2001	2002	Percent Change 1998 - 2002	Percent Change 2001 - 2002	Percent Share 2002
Japan	1,365,324	1,406,418	1,482,161	1,662,525	1,533,141	12.29%	-7.78%	15.3%
Germany	810,692	938,037	907,468	1,087,878	1,106,569	36.50%	1.72%	11.0%
Netherlands	750,448	727,100	844,745	818,258	1,021,644	36.14%	24.86%	10.2%
Canada	685,820	799,830	773,064	889,213	852,929	24.37%	-4.08%	8.5%
Mexico	394,252	429,653	542,276	605,778	730,579	85.31%	20.60%	7.3%
United Kingdom	420,589	422,313	465,896	558,397	505,076	20.09%	-9.55%	5.0%
France	566,700	583,340	476,005	549,700	487,840	-13.92%	-11.25%	4.9%
Belgium	295,191	369,632	408,897	491,455	344,706	16.77%	-29.86%	3.4%
Australia	270,336	262,940	271,563	286,319	322,200	19.19%	12.53%	3.2%
Italy	232,456	272,426	297,898	310,445	317,944	36.78%	2.42%	3.2%
Ireland	149,201	140,204	167,807	217,231	231,558	55.20%	6.60%	2.3%
China	90,902	126,776	145,329	202,951	211,832	133.03%	4.38%	2.1%
Korea	83,054	134,599	166,145	183,611	206,146	148.21%	12.27%	2.1%
Brazil	229,740	191,063	206,636	228,829	190,067	-17.27%	-16.94%	1.9%
Hong Kong	141,229	124,566	144,485	170,271	156,008	10.46%	-8.38%	1.6%
Switzerland	104,491	117,930	124,200	151,341	146,794	40.48%	-3.00%	1.5%
Spain	110,939	138,609	149,380	168,750	137,168	23.64%	-18.72%	1.4%
Taiwan	101,858	118,228	114,142	109,629	120,749	18.55%	10.14%	1.2%
India	56,131	61,854	70,453	84,383	98,224	74.99%	16.40%	1.0%
Sweden	154,366	130,294	123,428	120,293	91,226	-40.90%	-24.16%	0.9%
Dominican Rep	111,787	102,896	93,207	81,143	87,972	-21.30%	8.42%	0.9%
Israel	73,492	70,397	71,672	72,293	85,319	16.09%	18.02%	0.8%
Singapore	79,723	85,308	86,175	89,761	81,412	2.12%	-9.30%	0.8%
Denmark	34,374	39,249	45,349	52,420	73,643	114.24%	40.49%	0.7%
South Africa	48,720	49,980	54,969	60,921	65,218	33.86%	7.05%	0.6%
Saudi Arabia	54,082	46,821	49,715	59,742	63,680	17.75%	6.59%	0.6%
Austria	56,618	60,200	63,784	53,877	49,774	-12.09%	-7.62%	0.5%
Venezuela	31,274	30,543	39,652	51,919	46,591	48.98%	-10.26%	0.5%
Greece	33,697	33,464	37,904	33,820	40,270	19.51%	19.07%	0.4%
Colombia	50,408	33,657	40,908	40,529	39,175	-22.28%	-3.34%	0.4%
Sub Total Top 30	**7,606,156**	**8,069,679**	**8,491,461**	**9,532,336**	**9,483,158**	**24.68%**	**-0.52%**	**94.3%**
Sub Total Other	**591,144**	**600,095**	**609,205**	**636,882**	**569,724**	**-3.62%**	**-10.54%**	**5.7%**
Total to World	**8,197,300**	**8,669,774**	**9,100,666**	**10,169,218**	**10,052,882**	**22.64%**	**-1.14%**	**100.0%**

Source: US Census Bureau

Top 30 U.S. Export Markets 1998 - 2002
(Values in $ Thousands)

HTS 9019 _ Mechano-Therapy, Massage, Psychological Aptitude-Testing Appliances And Apparatus; Ozone Etc. Therapy And Respiration Apparatus; Parts And Accessories

Country	1998	1999	2000	2001	2002	Percent Change 1998 - 2002	Percent Change 2001 - 2002	Percent Share 2002
Canada	62,749	71,738	76,336	82,101	90,322	43.94%	10.01%	16.4%
Japan	62,136	69,926	82,506	70,052	62,807	1.08%	-10.34%	11.4%
Germany	35,783	39,846	45,698	36,350	35,792	0.03%	-1.54%	6.5%
UK	32,247	26,104	33,248	35,244	35,191	9.13%	-0.15%	6.4%
Ireland	13,839	15,208	30,896	31,163	32,791	136.95%	5.22%	5.9%
France	21,223	22,237	24,505	26,143	29,824	40.53%	14.08%	5.4%
Netherlands	36,832	38,822	44,837	38,252	28,911	-21.51%	-24.42%	5.2%
Mexico	11,130	21,031	28,447	23,835	27,010	142.68%	13.32%	4.9%
Spain	12,584	16,390	18,304	17,464	22,300	77.21%	27.69%	4.0%
Australia	10,888	11,333	12,109	11,980	12,965	19.08%	8.22%	2.4%
Hong Kong	9,630	12,389	14,295	16,992	12,057	25.20%	-29.04%	2.2%
Italy	11,373	9,110	13,805	13,342	11,654	2.47%	-12.65%	2.1%
Taiwan	9,954	10,131	15,861	15,888	10,746	7.96%	-32.36%	1.9%
Belgium	12,862	13,758	13,972	11,224	10,535	-18.09%	-6.14%	1.9%
Saudi Arabia	2,846	2,207	5,361	5,480	7,226	153.90%	31.86%	1.3%
Singapore	3,460	1,892	2,364	2,624	7,009	102.57%	167.11%	1.3%
Austria	2,845	4,318	3,250	6,105	6,711	135.89%	9.93%	1.2%
Brazil	4,928	2,071	4,797	5,382	6,555	33.02%	21.79%	1.2%
Russia	10,350	2,001	3,563	9,753	6,193	-40.16%	-36.50%	1.1%
Sweden	9,313	5,707	5,006	11,442	5,828	-37.42%	-49.06%	1.1%
Korea	3,391	5,501	6,076	4,688	5,410	59.54%	15.40%	1.0%
India	4,150	3,874	4,986	4,386	5,295	27.59%	20.73%	1.0%
China	1,540	2,422	4,143	5,248	5,093	230.71%	-2.95%	0.9%
Finland	2,354	3,300	2,823	4,937	4,988	111.89%	1.03%	0.9%
Israel	3,156	3,948	4,435	3,985	4,405	39.58%	10.54%	0.8%
Norway	2,264	2,285	10,252	3,401	4,232	86.93%	24.43%	0.8%
South Africa	2,432	1,811	3,714	3,938	3,961	62.87%	0.58%	0.7%
Thailand	2,109	4,236	6,523	6,278	3,639	72.55%	-42.04%	0.7%
New Zealand	3,173	3,031	3,537	3,055	3,439	8.38%	12.57%	0.6%
Switzerland	2,895	2,638	3,235	5,486	3,313	14.44%	-39.61%	0.6%
Sub Total Top 30	**404,436**	**429,265**	**528,884**	**516,218**	**506,202**	**25.16%**	**-1.94%**	**91.8%**
Sub Total Other	**42,428**	**35,976**	**44,654**	**50,084**	**45,038**	**6.15%**	**-10.08%**	**8.2%**
Total to World	**446,864**	**465,241**	**573,538**	**566,302**	**551,240**	**23.36%**	**-2.66%**	**100.0%**

Source: US Census Bureau

Top 30 U.S. Export Markets 1998 - 2002
(Values in $ Thousands)

HTS 9021 – Orthopedic Appliances, Splints, Artificial Parts of The Body, Hearing Aids and Other Appliances to Compensate for a Defect & Parts

Country	1998	1999	2000	2001	2002	Percent Change 1998 - 2002	Percent Change 2001 - 2002	Percent Share 2002
Ireland	38,642	84,771	155,577	463,394	622,446	1510.80%	34.32%	19.4%
Japan	295,557	344,112	415,161	404,144	379,310	28.34%	-6.14%	11.8%
Switzerland	110,780	152,172	222,719	229,055	269,863	143.60%	17.82%	8.4%
Canada	239,252	240,274	251,004	251,529	254,293	6.29%	1.10%	7.9%
UK	155,939	190,304	226,011	233,798	227,274	45.75%	-2.79%	7.1%
Netherlands	157,059	162,541	162,785	184,818	225,492	43.57%	22.01%	7.0%
Germany	146,193	162,810	157,228	180,715	170,565	16.67%	-5.62%	5.3%
Sweden	88,587	81,162	91,825	109,566	155,876	75.96%	42.27%	4.9%
France	133,621	133,623	131,605	126,908	127,835	-4.33%	0.73%	4.0%
Australia	94,168	91,664	95,181	101,520	108,836	15.58%	7.21%	3.4%
Mexico	21,160	27,453	47,231	66,661	79,761	276.94%	19.65%	2.5%
Italy	56,263	69,552	73,377	72,840	75,667	34.49%	3.88%	2.4%
Spain	47,371	52,218	60,868	57,161	54,355	14.74%	-4.91%	1.7%
Belgium	28,278	56,879	58,350	56,812	46,282	63.67%	-18.53%	1.4%
Hong Kong	18,082	25,512	32,130	37,641	45,552	151.92%	21.02%	1.4%
Korea	28,210	33,871	40,024	43,539	43,805	55.28%	0.61%	1.4%
Brazil	22,117	30,384	29,269	25,377	30,009	35.68%	18.25%	0.9%
Denmark	24,230	29,277	31,995	29,179	27,406	13.11%	-6.08%	0.9%
China	5,784	6,251	7,890	14,887	20,996	263.00%	41.04%	0.7%
Singapore	15,949	19,345	19,723	22,692	18,682	17.14%	-17.67%	0.6%
Greece	12,316	15,782	15,871	16,099	16,358	32.82%	1.61%	0.5%
Taiwan	15,082	16,300	17,282	14,603	15,602	3.45%	6.84%	0.5%
Turkey	6,869	12,752	18,085	18,719	14,418	109.90%	-22.98%	0.5%
Costa Rica	885	2,108	1,757	6,789	12,386	1299.55%	82.44%	0.4%
Colombia	5,056	4,474	5,910	7,693	12,060	138.53%	56.77%	0.4%
Austria	11,851	14,007	10,975	9,973	11,153	-5.89%	11.83%	0.3%
India	5,263	7,982	9,502	8,557	9,442	79.40%	10.34%	0.3%
Israel	9,721	9,444	11,218	10,120	9,168	-5.69%	-9.41%	0.3%
South Africa	8,278	7,318	8,973	11,007	8,768	5.92%	-20.34%	0.3%
Poland	2,326	2,521	5,225	8,153	8,150	250.39%	-0.04%	0.3%
Sub Total Top 30	**1,804,889**	**2,086,863**	**2,414,751**	**2,823,949**	**3,101,810**	**71.86%**	**9.84%**	**96.8%**
Sub Total Other	**92,324**	**98,145**	**106,916**	**114,703**	**102,131**	**10.62%**	**-10.96%**	**3.2%**
Total to World	**1,897,213**	**2,185,008**	**2,521,667**	**2,938,652**	**3,203,941**	**68.88%**	**9.03%**	**100.0%**

Source: US Census Bureau

Top 30 U.S. Export Markets 1998 - 2002
(Values in $ Thousands)

HTS 9022 – X-Ray Apparatus (Including Radiography or Radiotherapy Apparatus), X-Ray Tubes & Generators, High Tension Generators, Parts and Accessories

Country	1998	1999	2000	2001	2002	Percent Change 1998 - 2002	Percent Change 2001 - 2002	Percent Share 2002
Japan	227,986	259,790	279,139	299,150	306,987	34.65%	2.62%	15.3%
France	127,113	167,992	168,954	248,365	298,590	134.90%	20.22%	14.9%
Germany	231,396	211,084	226,847	272,301	269,618	16.52%	-0.99%	13.5%
Canada	114,174	118,184	141,129	122,454	147,487	29.18%	20.44%	7.4%
China	31,308	58,328	71,253	136,676	107,140	242.21%	-21.61%	5.4%
UK	72,282	54,811	65,079	95,724	94,795	31.15%	-0.97%	4.7%
Netherlands	53,764	51,935	40,767	67,360	85,187	58.45%	26.47%	4.3%
Italy	30,284	46,330	48,449	56,964	75,207	148.34%	32.03%	3.8%
Brazil	87,716	70,427	71,315	81,826	64,194	-26.82%	-21.55%	3.2%
Mexico	29,544	45,956	71,258	40,718	58,923	99.44%	44.71%	2.9%
Korea	12,973	24,835	41,968	30,031	42,647	228.74%	42.01%	2.1%
Singapore	20,436	25,134	32,923	34,336	35,559	74.00%	3.56%	1.8%
India	10,982	15,124	17,777	32,025	35,330	221.71%	10.32%	1.8%
Australia	42,677	45,587	49,182	30,335	34,829	-18.39%	14.81%	1.7%
Spain	32,615	45,164	46,563	20,097	26,793	-17.85%	33.32%	1.3%
Taiwan	27,398	20,395	28,158	16,425	26,623	-2.83%	62.09%	1.3%
Switzerland	12,755	16,349	13,554	18,188	24,406	91.34%	34.19%	1.2%
Belgium	93,010	57,207	22,139	22,425	23,364	-74.88%	4.19%	1.2%
Hong Kong	36,261	21,214	16,492	21,228	22,245	-38.65%	4.79%	1.1%
Israel	19,798	13,548	18,974	17,890	19,514	-1.43%	9.08%	1.0%
Venezuela	7,446	6,014	11,304	17,687	16,579	122.66%	-6.26%	0.8%
Sweden	12,502	13,560	13,841	12,337	12,468	-0.27%	1.06%	0.6%
Malaysia	6,239	2,956	5,472	15,228	11,013	76.52%	-27.68%	0.5%
Chile	5,293	6,532	11,957	7,997	9,988	88.70%	24.90%	0.5%
Norway	5,375	3,488	5,288	11,818	8,831	64.30%	-25.28%	0.4%
Finland	10,525	11,513	6,906	10,252	8,771	-16.67%	-14.45%	0.4%
Saudi Arabia	9,876	7,253	6,932	12,027	7,515	-23.91%	-37.52%	0.4%
Russia	5,157	12,489	1,432	4,396	7,439	44.25%	69.22%	0.4%
Jordan	278	369	460	1,704	7,365	2549.28%	332.22%	0.4%
Romania	656	107	4,304	4,747	6,327	864.48%	33.28%	0.3%
Sub Total Top 30	**1,377,819**	**1,433,675**	**1,539,816**	**1,762,711**	**1,895,734**	**37.59%**	**7.55%**	**94.66%**
Sub Total Other	**119,583**	**137,642**	**131,799**	**174,952**	**106,881**	**-10.62%**	**-38.91%**	**5.34%**
Total to World	**1,497,402**	**1,571,317**	**1,671,615**	**1,937,663**	**2,002,615**	**33.74%**	**3.35%**	**100.00%**

Source: US Census Bureau

B. MARKET SIZES FOR MEDICAL EQUIPMENT AND SUPPLIES

The Best Markets Matrix (below) provides comparative market size data on 53 countries considered "best prospects" for U.S. exports of Medical Equipment and Supplies. The countries are listed in alphabetic order, not in rank order. The data on total market, import market, and imports from the U.S. are based on local sources and reflect the best estimates of USCS commercial officers in each country.

Statistical accuracy and comparability to other sources (e.g., "USDOC Bureau of Census") are affected by a number of factors; including lack of published figures in certain markets, variances in data collection techniques, sources of data, and industry definitions.

HIGH POTENTIAL EXPORT MARKETS FOR U.S. MEDICAL EQUIPMENT & SUPPLIES MARKET SIZE BY COUNTRY

(Values in US$ Millions)

	Total Market			Total Imports			Imports from the U.S.		
COUNTRY	**2000**	**2002**	**% Change**	**2000**	**2002**	**% Change**	**2000**	**2002**	**% Change**
Argentina	765	215	-72%	763	149	-80%	244	44	-82%
Australia	960	957	0%	849	850	0%	425	425	0%
Austria	392.2	372.7	-5%	541.7	657.3	21%	114.1	134.6	18%
Bahamas*	N/A	N/A	N/A	43	N/A	N/A	18	24	29%
Bahrain	11	22	100%	11	22	100%	3.4	6.5	91%
Botswana*	0.19	0.4	111%	0.19	0.4	111%	N/A	N/A	N/A
Brazil	1,634	1,871	15%	918	948	3%	486	500	3%
Bulgaria	68.5	110.5	61%	63.3	104.4	65%	12.3	15.7	28%
Canada	2,474	2,987	21%	1,747	2,144	23%	1,136	1,383	22%
Chad	15.66	15.95	2%	15.66	15.95	2%	1.91	1.95	2%
Chile	250	283	13%	250	283	13%	130	178	37%
Colombia	151.2	158	4%	99.3	109	10%	48.4	52	7%
Croatia*	105	110	5%	103	108	5%	N/A	N/A	N/A
Cyprus	N/A	72	N/A	N/A	65	N/A	9.1	15	65%
Ecuador	2.3	3.8	65%	1.5	3	100%	1.5	3	100%
Egypt	489	572	17%	467	546	17%	110	136	24%
Finland	1,164	1,382	19%	240	325	35%	63	108	71%
Germany	12,500	13,720	10%	11,600	13,260	14%	3,500	4,080	17%
Greece	565	690	22%	563	688	22%	81	98	21%
Haiti	21.1	25.1	19%	14.1	17.6	25%	3.1	4	29%
Hong Kong	220	256	16%	724	881	22%	183	221	21%
Hungary	155	170	10%	138	145	5%	13	18	38%
India	305	503.8	65%	195	329.5	69%	98	197.7	102%
Indonesia*	128.9	158.7	23%	108.6	150.5	39%	N/A	N/A	N/A
Ireland	210	215	2%	684	702	3%	358	371	4%
Israel	500	530	6%	380	400	5%	215	230	7%
Italy	2,575	3,030	18%	1,742	2,050	18%	958	1,160	21%
Jordan*	N/A	N/A	N/A	84.6	94.1	11%	14.9	17.3	16%
Kazakhstan	33.92	45.7	35%	35.73	45.5	27%	5.44	4.5	-17%

*1999-2001 Values

**2001-2003 Values

	Total Market			Total Imports			Imports from the U.S.		
COUNTRY	**2000**	**2002**	**% Change**	**2000**	**2002**	**% Change**	**2000**	**2002**	**% Change**
Kuwait	72.6	85	17%	72.6	85	17%	21.7	25.5	18%
Lebanon*	N/A	N/A	N/A	47	62	32%	20	20	0%
Malaysia	N/A	N/A	N/A	270.6	340	26%	61.1	134	119%
Mauritius*	35.5	41	15%	34.5	40	16%	0.8	1.5	88%
Netherlands	2,344	1,947	-17%	2,268	1,938	-15%	242	270	12%
New Zealand	17,965	19,010	6%	12,022	12,105	1%	54	58	7%
Norway	561	750	34%	422	583	38%	129	180	40%
Philippines	72	77	7%	58	54	-7%	19	23	21%
Romania	95	120	26%	85	108	27%	27	80	202%
Russia	960	1,120	17%	715	830	16%	140	180	29%
Singapore	294	140	-52%	490	282	-42%	185	100	-46%
South Korea	1001.1	1190.2	19%	727.4	910.8	25%	436.5	561.8	29%
Spain	1,838	2,197	20%	1,600	1,944	22%	560	690	23%
Sri Lanka	26	28	8%	26	28	8%	4	4	0%
Sweden	738	930	26%	887	1,069	21%	271	296	9%
Switzerland	741	784	6%	511	539	5%	106	112	6%
Syria	30	35	17%	25	35	40%	3	2.25	-25%
Taiwan	746	900	21%	569	780	37%	237	235	-1%
Thailand	249	311	25%	195	258	32%	77	102	32%
Turkey	750	875	17%	685	800	17%	110	150	36%
Ukraine*	180	210	17%	80	100	25%	8	10	25%
UAE	354	485	37%	340	443	30%	95	124	31%
UK**	3.4	4.2	24%	2.2	2.5	14%	0.8	0.8	0%
Vietnam	135	160	19%	134.5	159	18%	34	45	32%

* 1999–2001 Values
**2001–2003 Values

III. BEST-PROSPECT MARKET ASSESSMENTS

Following are overviews of "best prospect" markets for U.S Medical Equipment & Supplies, based on observations of USCS posts in each country. The countries appear in alphabetical order. For more detailed market research on medical equipment & supplies in these and other specific markets, see relevant industry Sub sector Analyses (ISAs) listed in Chapter IV. For general commercial and economic information on individual countries, see the relevant Country Commercial Guides (CCGs).

ARGENTINA

Healthcare spending in Argentina has totaled around $21 billion per year over the past several years, but this spending has not translated into successful results. On the contrary, the sector was experiencing a profound crisis, which has been aggravated by the devaluation of the Argentine peso in January 2002. With the peso declining from $1 = 1 peso to more than $1 = 3.5 pesos in just the first six months of 2002, costs of imported items have become many times more expensive. This has severely limited the supply of critical medical supplies and medicines in a sector heavily dependent on imported goods.

Under a national health emergency declared in 2002, the national government passed Law No. 25590 to exempt from tax duties critically important imported medical equipment, supplies, and medicines. Imports of these products must comply with product import registrations and authorizations as required by ANMAT (the Argentine equivalent of the USFDA). The provision is estimated to lower import costs approximately 30% and increase access to importing goods. However, the law will fall short of returning prices to pre-devaluation levels.

Another measure passed in 2002, the Emergency Compulsory Medical Plan, reduced by approximately 30% services that "Obras Sociales" (Social Security) and "Prepagas" (private healthcare plans) are required to provide to their affiliates. Patients are severely impacted by the crisis, in some cases receiving fewer or no healthcare services or with additional co-payments to physicians that in turn experience long delays collecting fees from healthcare institutions.

World Bank and Inter-American Development Bank loans totaling $325 million are to be used for health projects, including upcoming international pharmaceutical bidding. In coordination with the Ministry of Health, $127 million are specifically to fund the National Healthcare Emergency.

Because of multilateral development bank loans and preferential importing terms for critical medical supplies, the medical industry may be one of the few sectors of the Argentine economy that will likely continue to receive a steady flow of imports through 2002 and into 2003.

Best prospects U.S. exports are: implants: stents, cardiac valves, hearing aids, specialized disposables (catheters, cannulae, electrodes, hemodialysis filters, surgical instruments), diagnostic reagents.

AUSTRALIA

Medical equipment is one of Australia's largest markets for exporters of U.S. products. More than 85% of devices and diagnostics used in Australia are imported. Approximately 60% of these products come from the U.S. Other major market suppliers are Germany, Japan and the EU.

Australia is a mature market for medical equipment, characterized by modest sales growth and strong competition. A large number of small companies and a small number of multinational firms serve the market. As the world's largest producer of medical equipment, most of the major U.S. medical companies are represented in Australia, either through local representatives or subsidiary companies. More than 500 companies are involved in the medical device and diagnostics

industry. The market is valued at approximately $1.1 billion, representing about one% of the global market.

Although a relatively small market, Australia's high per capita income means that there is demand for the full range of sophisticated medical equipment. In addition, Australia enjoys a high standard of medical practice. This, together with the expectation of state-of-the-art medical treatment by an educated population, ensures a continuing need for high quality and innovative medical equipment and products.

The Government is the primary purchaser of medical equipment in Australia. Industry estimates that public hospitals account for 70% of sales of medical equipment, while State and Territory tenders account for 65% of medical consumables. The Government is also a major buyer of dental equipment, accounting for around 15-20% of the total market. Thus, government policy and activity in the provision of public health services is a major factor in the demand for medical equipment. Nonetheless, the provision of health services by the private sector is increasing. Further increases are likely due to the rise in the number of Australians with private health insurance; the corporatization of services such as pathology, radiology and general practice; and the expanding role of the private sector in the care of Australia's aging population.

The Therapeutic Goods Administration (TGA) regulates the medical equipment market in Australia. A new regulatory framework will come into effect on October 5, 2002 to harmonize Australian regulations with international standards. Both the current and the new systems classify devices according to the degree of risk associated with their application. Thus, medical equipment, such as electro medical products, sterile devices, and implantables from all sources, are likely to require the most rigorous assessment by the TGA before they can enter the Australian market. As this approval can only be obtained by an Australian sponsor, U.S. exporters need to appoint an Australian representative before their products can be approved by the TGA.

U.S. medical equipment is traditionally well received in Australia due to its perceived high quality. Opportunities exist for state-of-the-art and innovative medical equipment and products, which can result in a significant improvement in clinical outcomes. In particular, products, which serve Australia's aging population, such as treatments for arthritis, or equipment, which allows aged people to live independently, are likely to experience growth. Also in demand are information technology applications, which facilitate information sharing and service delivery over great distances, along with those relating to practice and records management and supply chain management.

AUSTRIA

With its location in Central Europe and as one of the EU member states, Austria represents a desirable, affluent pilot market for U.S.-made advanced medical equipment. In 2001, U.S. manufacturers seized 20.1% of the health care equipment imports and are the second-largest suppliers following Germany with a 37.4% import share. The Austrian market size experienced a decrease from 2000 to 2001 as a result of the budget cut within the Austrian health care sector. Nevertheless, U.S. imports are expected to grow 4% real over the next three years. In fact, U.S.-engineered medical equipment sales are actually much larger than reflected in official import statistics, as many products imported from Western Europe and Far Eastern countries are assembled by subsidiaries of U.S. firms.

Austria has 325 public and private hospitals with 77,500 beds of which approximately 900 are designated for intensive care. A total of 100 hospital departments are equipped with intensive care units. Austria has 888 beds per 100,000 inhabitants--about the average in Western Europe.

Austria has approximately 35,300 active physicians, of which approximately 17,000 are employed by private or public hospitals or walk-in clinics. This translates to 441 physicians per 100,000 inhabitants. Of the 35,300 active

physicians, 16,550 physicians have independent private practices.

The best opportunities for new sales appear to be for state-of-the art equipment such as electrocardiographs, ultrasound apparatus, endoscopes, scanners, computer tomograph equipment, nuclear medical instruments and clinical laboratory equipment. Hospital expansion and construction are limited, although there are still some pending projects in the provinces.

BAHRAIN

Bahrain has long depended on U.S. suppliers for medical equipment. Germany, Britain, and Japan are the prime competitors for U.S. suppliers in Bahrain's health sector. The Government of Bahrain continues to give budgetary priority to health services with $363 million allocated to the Ministry of Health in the 2001-2002 budget, a 17% increase over the previous budget cycle. We expect U.S. medical equipment exports to Bahrain to increase by close to 40%.

The Government of Bahrain is encouraging the private sector to enter the health care market and thus share the cost of services in this vital area. It is also drawing up plans to attract international hospitals in a move to further promote health tourism in the country. One new private hospital, the Ibn Nafees Medical Complex opened in December 2000. Two more private hospitals, Bahrain Specialist Hospital and the Al Hayat Hospital, are scheduled for opening this year. The largest hospital in Bahrain, state-run Sulmaniya Medical Complex, has budgeted $3.7 million for replacement of medical equipment in 2002. They are looking to replace patient vital sign monitors, infant incubators, ventilators, infusion pumps, and acquire a deep X-ray therapy machine.

BOTSWANA

The Government of Botswana Ministry of Health is planning a series of infrastructure improvements and equipment upgrades, including improvements to several district medical facilities. The Ministry also plans the implementation of new performance standards, indicators, procedures and guidelines for the effective delivery of health care services. In the 2001 Budget the health sector was identified as a priority, with $33 million allocated for priority projects for 2000/1. Planned projects include upgrading several regional hospitals.

The Botswana government would like to develop a local pharmaceutical production capacity. Given the growing regional demand, such a facility could be supported in the local market. U.S. and European firms have shown some interest in either expanding regional production capacity by opening new facilities in Botswana or by relocating existing regional production capacity from South Africa to Botswana.

BRAZIL

Brazil is the largest medical market in Latin America. The total market for medical equipment in Brazil should continue to expand through 2002, with solid local production and a sizeable import market. This market comprises medical equipment and devices, dental equipment and products, radiology and image diagnostic equipment and laboratory equipment.

Brazilian medical equipment revenues in 2001 reached $1.8 billion, compared to $1.77 billion in 2000. The United States accounts for 50% of the import market. U.S. sales have traditionally been made through Brazilian agents, distributors and importers who sell to hospitals and clinics. There are few high-quality Brazilian manufacturers of advanced medical products so reliance on imports will generally continue. Local buyers view U.S. and other foreign products (mainly Canadian and European) as having equally good quality and reliability. Financing often becomes the differentiating criteria in making the sale.

There are some 3,000 equipment and supply distributors in Brazil, but only 3,3 % of these firms can be classified as large companies. Excluding the direct sales networks of individual

multinational manufacturers, virtually all distributors are regional rather than national.

In addition to the attractive size of the Brazilian medical market, U.S. exporters should consider the opportunities offered by Mercosul, and use Brazil as a "spring board" for export into the region. Since compulsory product registration before sale is required in the entire region, U.S. exporters should consult a local lawyer/consultant before signing a contract with any agent/distributor.

An interesting trend in Brazil is the growing market of the Home Health Care, which moved approximately $120 to 200 million in 2001. Brazil now has approximately 150 of these types of care providers, compared to approximately 1,440 in the United States. These organizations are being viewed as a good way to cut hospitalization costs, while offering better services to the patients. Nowadays, health insurance companies are responsible for 99% of the costs with home care treatment. The Nursing Regional Council is developing procedures on how to regulate this market, including standards for health professionals.

Private entities such as universities and even religious organizations around the country offer new opportunities for both U.S. equipment and training/management services suppliers. Interested U.S. suppliers should look for opportunities beyond the larger communities of São Paulo and Rio de Janeiro (both in Southeast Brazil). In particular, opportunities exist in the northeastern states of Bahia, Ceará, Pernambuco, Paraíba and Rio Grande do Norte; the southeastern states of Minas Gerais and Espirito Santo; the central western states of Goiás and Mato Grosso do Sul; and the southern states of Paraná, Santa Catarina and Rio Grande do Sul.

Of Brazil’s total medical equipment sales valued at $1.82 billion in 2001, approximately 48% were to the private health sector, 44% were to the public sector and 8% were exported. Brazil's economic difficulties slowed government investment plans for public hospitals. However, the continued expansion of the Brazilian private health care sector, particularly HMO's (private health care plans), was the good news the market needed and should create new opportunities for U.S. exporters, particularly for more advanced medical equipment, disposables, diagnostic devices, implants and components.

BULGARIA

Increased imports of medical equipment are expected as the result of new healthcare legislation and an increase in the government’s budget for health care. Other favorable factors are the ongoing privatization of state-owned polyclinics and the World Bank project for health care restructuring and reform.

The Government of Bulgaria is spending $24 million in addition to $63 million in World Bank loans to fund the Health Sector Reform Project, which will present attractive public procurement opportunities for U.S. suppliers of medical equipment and suppliers of healthcare management and delivery systems and services for doctors and for the new Bulgarian health insurance system. Upcoming procurements of diagnostic equipment, modern patient records systems and hospital management systems. In addition, procurements will be made for National Health Insurance Fund information systems development, training, public information and technical assistance, and support for outpatient and inpatient care.

CAMBODIA

The United States is the second largest supplier (after France) of drugs, medical supplies and medical equipment to Cambodia. The Ministry of Health is the single largest purchaser of drugs, medical supplies and medical equipment, but the proportion of health care provided by the private sector is increasing. Only companies licensed by the Ministry of Health may import drugs, medical supplies or medical equipment, and list of these importers is available from the Ministry or the U.S. Embassy. There is no

prohibition on importing used medical equipment to Cambodia.

CANADA

Nearly 10 million Canadian "baby-boomers" who began to reach their 50s in the mid-1990s have started to join the ranks of retired and aging Canadians, the major consumers of health care services in the country. Demographic changes are about to create an unprecedented demand for medical care and for the necessary equipment to provide such care in a timely and efficient manner.

Whether this technology is required by public or private medical care facilities, growth in demand for modern and cost-efficient medical equipment is expected to accelerate over the next three years. Significant increases in demand are expected for diagnostic equipment using x-rays, ultrasonic, and magnetic resonance imaging technologies.

These types of medical equipment are grouped under the following HS code numbers:

- HS 901812 - Ultrasonic Scanning Apparatus;
- HS 901813 - Magnetic Resonance Imaging Apparatus;
- HS 902212 - X-Ray Equipment Computed Tomography;
- HS 902214 - X-Ray Equipment; HS 902219 - X-Ray Equipment Radiography/Radiotherapy.

Growth in demand for all categories of medical equipment is expected to average close to 10% per annum over the next three years. While the electro-diagnostic equipment categories of the above mentioned HS Code Numbers will experience annual growth rates in excess of 20%.

The use of medical devices is strictly regulated in Canada. Health Canada's Therapeutic Products Program (TPP) ensures the safety and effectiveness of medical devices. In recent years, Canadian authorities have worked at harmonizing their regulations with those of Europe and the United States. Medical devices are classified into four categories depending on the level of potential risk to the patient. Class I represents devices that pose the least risk while Class IV devices pose the highest risk.

CHAD

As a developing country with serious public health problems, Chad has consistent demand for pharmaceutical products and medical equipment. Some of Chad's most prevalent diseases include malaria, diarrhea diseases and respiratory infections. Anti-malaria, anti-parasitic and antibiotic medicines are among the most widely used categories of medicine. A wide variety of medical equipment is also needed to supply hospitals and health centers throughout the country. Because purchasing power is low, lower cost pharmaceuticals (like generics) and medications to treat a broad range of illnesses will sell most readily.

The pharmaceutical market can be divided into two categories: private pharmacies that supply brand-name products and public pharmacies that supply generic products in each hospital and health center. One wholesaler, Laborex, primarily supplies private pharmacies. Laborex is in turn supplied by a central procurement office in France. Public pharmacies are supplied through a government distribution center that procures its medicine through international tenders. U.S. suppliers may find it difficult to penetrate the private market without going through Laborex, but several other companies have begun to import some pharmaceuticals. Drug companies usually promote their products by recruiting local public health professionals to serve as representative for particular products. Generic drug makers may find it useful to use a Chadian importer as a representative to participate in international tenders. Suppliers of medical equipment may contact the Ministry of Public Health to solicit their procurement needs.

CHILE

Chile currently spends approximately 7% of its GDP on healthcare and has doubled its health

budget since 1990 to over $500 million, making it one of the largest government expenditure areas. The Chilean government guarantees healthcare coverage as a constitutional right and is committed to improving the national public-health system that provides healthcare for approximately 70% of the Chilean population of nearly 16 million. Several programs for large-scale purchases of modern equipment have received government approval as part of an effort to upgrade the public and private health sectors.

Chile's "Health in Action Program 90-2000" that has already called for an investment budget of over $1 billion has permitted the delivery of new and re-constructed hospitals plus several modernization projects and the addition of new services. A large number of private hospitals and some public sector hospitals are expanding their present facilities or planning the construction of new ones.

Chile is well known for the openness of its trading and overall economic system. Foreign suppliers currently do not face significant trade barriers in entering the relatively open Chilean market. The U.S. has been for years Chile's most important supplier of medical equipment holding about 50% of the market. U.S. main competitors are Japan and Germany.

COLOMBIA

Between 2000 and 2001, Colombian market for medical equipment and devices grew 2.1% from $151.2 to $154.4 million, and it is expected to grow and additional 3% during 2002. It is expected that the demand will continue this upward trend during the next three years.

The United States is the leading supplier of medical equipment and devices to Colombia with a 48.4% market share during 2000 and 2001. Germany followed with 9.6%, and Brazil with 6.5%. The U.S. share is projected to reach 52% in 2002.

Major Colombian imports include electro-diagnostic and other electro-medical equipment, orthopedic equipment, and spare parts. Local production focuses mainly on equipment such as autoclaves, X-Ray viewing screens, furniture, etc. However, local manufacturers also produce catgut, venoclisys equipment, syringes, ophthalmologic lenses, surgical gloves, etc.

After nine years under the current Colombian health care system, it has approximately 16 million affiliates and is recognized as one of the most complete, efficient, and as a good example of solidarity. With improved management efficiency, the system could increase health care coverage and services efficiency, thus increasing market opportunities for U.S. suppliers.

The Empresas Promotoras de Salud - EPSs (local HMOs) are making progress, but still have a long way to go. They are paying overdue debts owed to hospitals, clinical laboratories, and other health care services providers, known in Colombia as Instituciones Prestadoras de Servicios (IPSs). Nevertheless, the EPSs have just surpassed the financial equilibrium point and the cash flow is not yet sufficient to pay creditors in full. The government owned Instituto de Seguros Sociales (ISS), which is Colombia's largest EPS and the one with the most serious financial problems. However, it has improved during 2001-2002 and has reached agreements with its major creditors for on going scheduled payments.

The Colombian judicial system is enforcing the mandatory EPSs' health coverage even for patients needing treatment for catastrophic diseases. In the past, EPSs often denied health care stating pre-existence and other arguments. As a result, EPSs are improving and expanding preventive care, early diagnosis services, and advanced technology to reduce treatment costs. EPSs should continue on a slow upward trend that will also improve the situation of the IPSs, resulting in a more substantial reactivation during 2003-2004.

CROATIA

Croatia's $110 million medical equipment market is dominated by imports from Japan. There is almost no domestic production of medical

equipment. Exporters to Croatia in this field are: Germany, the US, Italy, Austria, Great Britain, and Switzerland. The market has been rather stagnant in recent years. However, experts and government officials suggest that because of the poor state of medical equipment in most Croatian hospitals, and with the economy improving, the market might increase in upcoming years.

The Ministry of Health is the major player in the Croatian medical equipment market. The Ministry develops a health policy establishing fundamental objectives for health care, proposes the health care budget and the investment program for the sector, and monitors the work of state-owned health institutions.

The Croatian Institute of Health Insurance (HZZO) administers Croatia's healthcare system, which is based on compulsory payroll contributions from both employers and employees. Croatia has opted to retain a predominantly publicly funded health system, with an increasing degree of private service provision.

The ministry has embarked on a program of reform in the health care system in an attempt to modernize it and bring it closer to Western standards. These ongoing and future reforms offer U.S. medical device manufacturers opportunities to increase their market share in Croatia.

U.S.-manufactured medical equipment enjoys an excellent reputation in Croatia for its state-of-the-art technology, quality and reliability. However, medical equipment importers and specialists emphasize the real and perceived lack of technical assistance and service support as one of the main obstacles to further growth of US imports on the market. One should also take into account that the Croatian market for medical equipment is still very price-sensitive because of limited resources.

There are good opportunities in the Croatian market for US manufacturers of sophisticated diagnostic equipment such as electrocardiographs, endoscopes, scanners, computer tomograph imaging equipment, pace makers, digitalized x-ray equipment, nuclear medical instruments and clinical laboratory equipment.

The reforms that the Ministry of Health has already implemented, and still plans to undertake, as well as current state of medical equipment in Croatian hospitals suggest that several sub-sectors will be especially prominent in the near future. Therefore the highest sales potential for the coming years is expected to be in the following medical equipment sectors:

- Health informatics equipment;
- Home health care and rehabilitation equipment;
- Pathology equipment and services
- Diagnostic imaging equipment, especially ultrasonic diagnostic equipment
- Patient monitoring systems including intensive care units
- Dialysis equipment
- Day hospital and day surgery concepts

In Croatia, there are 65 public (owned by the state or by the županijas, Croatian administrative units) and two privately owned hospitals. One of the main goals of the health reform plan is to decentralize the Croatian health system, as well as its decision making process which will also affect methods of procurement. Some smaller changes have already taken place, so next year each županija will have an increased budget of approximately $ 1 million for medical equipment renovation and procurement.

In a recent interview, the Croatian Minister of Health, Dr. Andro Vlahušiæ, announced a budget increase for investment in new medical equipment. Medical equipment in most Croatian hospitals is outdated, and often inadequate, so the Ministry intends to allocate additional resources to address this problem. Dr. Vlahušiæ stressed that the short-term priorities for purchase of new equipment will be the following: anesthesiological apparatus and monitoring equipment, angiography equipment, instruments for day surgery and various diagnostic and endoscopic equipment.

The Ministry is currently in the process of issuing a tender for informatization and computerization of two pilot hospitals in Croatia. The value of this tender is expected to be approximately $1 million. After that similar tenders are expected for the remaining Croatian hospitals. Therefore, a company that is willing to participate in these early tenders will naturally have a better position in subsequent tenders. Furthermore, the Ministry of Health is looking for innovative ways to work with medical equipment suppliers. They are considering the option of public-private partnerships in which a company would equip and administer a certain medical center or hospital unit. At this early phase of this project the Ministry is willing to listen to different proposals.

At the moment, an extensive anti-smoking campaign is taking place in Croatia. This campaign, organized by Andrija Štampar School of Public Health, received substantial support from professional organizations and also significant publicity in local media. Among other things, a free telephone line was established where smokers intending to quit can seek support and encouragement, as well as professional advice. This campaign revealed that the Croatian market lacks a variety of anti-smoking products (gums, patches, medicines). Therefore, there is a demand from both customers and doctors/professionals for such products. This includes not only the above-mentioned medical products, but also others that could be considered as supplementary elements of an anti-smoking campaign such as instruments measuring the level of smoke, etc.

Local distributors of medical products and equipment claim that there is a large demand for diagnostic tests for drugs, pregnancy and various illnesses as well as for vitamins and dietary supplements. They also expressed willingness to import what they refer to as "hit" products, new US products for which equivalents do not exist in Europe. "New-ness" of the products is very important for the Croatian market that is otherwise very price-sensitive: if the main competitors do not have such products, local distributors are willing to accept the relatively higher prices of American products. Finally, OTC market is increasingly developing in Croatia, and therefore, importers are looking for quality OTC drugs and products.

CYPRUS

The new Nicosia General Hospital (436 beds with a potential for 600), currently under construction, will need the latest technology in medical and surgical equipment. The construction of the hospital will cost about $150.0 million. Construction will be completed by June 2003. Initial tenders for equipment of about $50.0 million will be announced over the next two years. U.S. companies have had an excellent track record in the past in Government tenders for medical equipment.

ECUADOR

The collapse of Ecuador’s economy three years ago created a growing demand for used medical equipment by private doctors and small-to-medium sized private clinics. The major supplier of used medical equipment is the U.S. – with virtually no competition from third country suppliers. Currently, the greatest demand is for ventilators, respirators, monitors, anesthesia machines, lamps, and basic X-ray equipment. The best prospect for the near future is imaging equipment. There are no trade barriers; however, public institutions are prohibited by law from purchasing used equipment. Sales of used medical equipment are expected to grow 25% per year over the next three years.

EGYPT

There is at present very little medical equipment manufacturing in Egypt. The use of sophisticated medical equipment is growing, but total expenditures are still small for a country of nearly 70 million. The government has ambitious plans to upgrade more than 40 general hospitals, clinics and laboratories in rural areas and to build ten new hospitals in the coming two years. The most promising sub-sectors include dialysis equipment

and lasers, medical, laboratory equipment, and MRI and ICU monitoring equipment.

ERITREA

Increased demand for medical supplies and medicines offers an opportunity for U.S. exporters. Health care is a priority with the government and is the primary target sector for USAID. A U.S. firm has succeeded in obtaining the support of the Ministry of Health to export to Eritrea nutritional drinks, juices and syrups.

FINLAND

Due to continuous budget cuts, the operating costs of Finnish hospitals have been reduced and the major hospital procurement is mainly replacing older equipment and buying some new equipment, e.g. for radiology and tele-medicine equipment.

The United States continues to be the most important external supplier of medical equipment in Finland with an import market share of about 34%, followed by Germany, Sweden, Japan and The Netherlands. High-quality and technically sophisticated medical equipment have the best market potential in Finland, especially equipment that increases efficiency and reduces occupancy rates in hospitals. Products such as patient monitoring systems, mini invasive surgery (MIS), day surgery equipment, magnetic resonance imaging (MRI) equipment, video endoscopes, digital image processing, and picture archiving have the best sales potential in Finland. Medical trade is duty free within the EU. Import duties are collected from production coming from non-EU countries. The duty fluctuates significantly according to the specific product, ranging from 5-12% for medical equipment.

Local production was about $1,100 million in 2001, consisting mainly of dental equipment, anesthesia monitors, specialized x-ray equipment, and chemical analyzers. Local production and imports do not overlap, as they do not compete with each other. Over 80% of local production is exported because of the small domestic market size.

FRANCE

The French medical sector continues to grow, reflecting population growth and longer life expectancy in France. The emergence of new technologies, such as same-day surgery, has generated a new market for home health care equipment. Although the development of such alternatives has caused a decline in the market for hospital-care equipment, it has created a demand for a whole new range of medical equipment. Important nuances of the French healthcare system are:

- Most of the population in France is covered by the "social security" (medical insurance) system;
- The government has created a framework for healthcare in which public and private hospitals work together to provide the population with easy access to healthcare;
- Both public and private hospitals are subject to government approval for their location, development and major medical equipment investments;
- For each medical specialty, there are bed/population ratios, which have a direct impact on government approvals;
- Each patient is free to choose treatment in either a public or private hospital.

Approximately 70% of all French medical costs are reimbursed. Attempts by the French government to control medical costs create strong opposition from the public and medical professionals. Since June 1998, as in the rest of Europe, all medical devices sold in France must bear the CE Mark. In France, the medical equipment sector is highly dependent on imports, mainly from the U.S., followed by those from Germany, Japan and Italy.

GERMANY

The German market for medical devices is estimated at $13.7 billion, approximately 14% of total health expenditures. There are about 1,200

local medical device manufacturers, which produced medical devices valued at roughly $8.3 billion in 2001. As a result of health reform efforts and cost-containment measures, local production is expected to increase only moderately, with the total market size estimated to grow little more than 4% in the year 2002. Still, because of a substantive investment backlog in practices and hospitals, the medical device market is considered a growth market and will continue to provide excellent potential for U.S. suppliers of innovative and price-competitive products. U.S. medical device exporters to Germany hold a 30% market share and will continue to find excellent potential in Germany and other European countries.

GREECE

The Greek market for medical equipment is dominated by imports, supplying 90% of the needs in this sector. Most of these imports originate from western countries with the majority coming from Germany, France, UK, Italy and the US.

Local production in Greece in this sector is small, with minor exports to third countries. These include furniture, inexpensive manual wheel chairs, bandages, gauze, and other rudimentary hospital supplies. Only one dynamic Greek company manufactures advanced medical equipment, such as artificial kidney equipment and hemodialysis equipment.

The Greek medical equipment market continues to experience growth close to 10% annually. However, especially for the years 2003 and 2004, the demand for medical equipment and supplies is expected to reach even higher levels due to preparations for the 2004 Olympic Games.

In view of the upcoming Olympic Games and a plan for the enhancement of the Greek health sector in general, the government has designated specific areas for improvement. These include the upgrading of existing public hospitals, improvement of emergency facilities, development of action programs for public health and sanitation improvement, and qualitative reorganization of the overall health sector in Greece.

Secondary improvements and corresponding investments are also anticipated. These include expansion of hospital ambulance fleets, procurement of quick response vehicles, mobile surgery units, vehicles for servicing disaster and disease relief efforts, small medical stations, and doping-control labs. Estimated costs exceed $250 million.

The 3rd C.S.F. (Community Support Framework) is a grant from the E.U., which aims to improve the standard of living of European citizens in various fields. One of these fields is the health sector. Between 2000 and 2006, approximately $1.35 billion of E.U. funds will be spent for the improvement of medical and health care in Greece.

A state of the art health park is going to be built in Athens and the participation of U.S. firms is vital to its successful development. It will be constructed to the highest international standards and will be the largest, most modern and well-equipped health park in Europe. U.S. firms have the opportunity to provide equipment for this health park, as well as consulting and managerial services.

U.S. medical products enjoy an excellent reputation in Greece and are considered to be of the highest quality and technology. There is a steady growth of imports from the U.S. in this sector, and this is expected to continue, growing at an average annual rate of 10-15% over the period 2003-2010.

Medical equipment consumption is concentrated mainly in the public sector, which accounts for 60-70% of the total purchases in this field. U.S. suppliers should be aware that agents and distributors of medical equipment sometimes experience long delays in receiving payment from state-owned hospitals. Local business partners generally, but not always, cover these delays.

The Greek Government has made plans and is currently implementing an I.T. development program aimed to modernize the technological capabilities of Greek hospitals. This program is projected to be complete by the year 2005, when it is expected that all hospitals in Greece will be able to exchange information via a national database.

Private health care is experiencing steady growth, taking advantage of the gaps and inflexibility in the public system. Many private clinics are extending their services to include those once available only in large public hospitals. Consequently the demand in the private sector for modern medical equipment has increased substantially during the last decade, and this trend is expected to continue through 2010.

Most promising sales prospects for U.S. suppliers for medical equipment are in sub-sectors such as surgical equipment and supplies, electro-medical equipment, I.T. systems and tele-medicine technology and know-how.

HAITI

Rural exodus pressure increases migration to Haitian cities. The Haitian Government does not have the resources to face this explosive population increase, and slums are spreading throughout the cities exacerbating concerns in public hygiene and urban sanitation. The Haitian Government is in the process of developing a health program throughout the country and will renew equipment in the public hospital and medical centers. A niche market exists for low technical refurbished U.S. medical equipment to be used by the private or the public sector. Drugs such as generic products and antibiotics are also good prospects for U.S. manufacturers. There are three local drug manufacturers, which rely completely on imported products, including finished products and raw materials.

HONG KONG

U.S. medical products command a 25% share of the Hong Kong market. Total medical equipment imports in 2001 were $801 million. The Hong Kong Government's Hospital Authority (HKHA) is the principal customer for medical equipment procuring all the equipment for Hong Kong's 44 public hospitals via open tender. Best prospects for American suppliers include medical device/equipment for diagnosing and treating Malignant Neoplasm, heart disease, cerebrovascular diseases, chronic liver disease and cirrhosis, and septicaemia. Other promising areas include equipment for diabetes mellitus, respiratory disease, cancer treatment, blood and virus analyzer, X-ray equipment, as well any equipment with leading-edge technology.

In recent years, the Hong Kong Government has placed more emphasis on rehabilitation for the disabled and for the elderly. Best prospects for rehabilitation equipment are: assessment equipment and tools, functional equipment and tools, therapeutic equipment for heart disease and for pain reduction and exercise equipment.

American, Germany and Japanese equipment dominates the Hong Kong medical equipment market. German products are extremely popular with the medical industry in Hong Kong due to their durability and reliability. Japanese products are usually compact, versatile, and competitive-price. U.S. companies must be able to provide after-sales service.

HUNGARY

The market for medical equipment is dominated by imports, which account for over 85% of the total market. American medical products have approximately 10% of the total market. Industry sources expect sales to grow 3 to 4% annually for the next two years. There is stiff competition from German, Austrian, Italian and Japanese firms, many of whom have long experience in Hungary. Nevertheless, there appears to be an opportunity for steadily increasing sales as improvements are made in Hungary's under funded health system. The best sales prospects for U.S. equipment are

expected to be cardiovascular and nuclear medicine (diagnostic & therapy equipment); diagnostic equipment & surgical devices; diagnostic imaging (CTs, MRIs); laboratory diagnostic equipment; and health care information systems.

The health care system is dominated by the Ministry of Health but operated on a decentralized basis by local governments, other Ministries, churches and non-governmental organizations but not profit-motivated companies or HMOs are few. Equipment purchases are financed by the Ministry of Health and the operators. The Health Insurance Fund tightly controls operating expenses, but the institutions decide what equipment to buy. Officials usually patronize established local distributors with reliable after-sales service and maintenance.

Leasing of medical equipment is rare. Purchasers are reluctant to accept used/refurbished medical equipment. The Public Procurement Act of 1995 requires open tenders for all purchases of goods exceeding HUF 18 Million ($64,000) and for services over HUF 9 Million ($32,000). All medical equipment and products, both local and imported, are subject to an obligatory licensing/registration procedure prior to entering the market. Hungary and the EU recently signed a mutual recognition agreement (MRA) for accepting testing by each other's notified bodies. This agreement does not apply to third-countries; therefore, U.S. equipment must be certified by the Hungarian agency (ORKI) even if it already has a CE mark of E.U. approval. Legislative changes have been proposed to correct this discriminatory provision.

INDIA

The Indian medical equipment industry is expanding to meet growing domestic demand. Of a total Indian population of one billion, which is growing at a rate of 2.5% per year, an estimated 100-150 million people demand high quality healthcare services at a competitive price. New hospital projects in the private sector have been incorporated in India to meet this significant demand. Favorable government policies and reduced import duties continue to support the growth of new healthcare projects in India. A successful medical insurance program encourages people to seek specialists' opinions and to use advanced medical diagnostic facilities like ultrasound scanners, MRI, CT scanners.

Despite the addition of hospital beds both in government and private sector hospitals, demand for hospitals and beds far surpasses the availability. About 80% of the country's estimated total 650,000 hospital beds are in the urban centers, leaving the balance 25% in the rural areas.

The Government of India (GOI) and state governments are planning to upgrade selected rural healthcare facilities in the country. New government and private sector hospital projects are also expected to increase hospital bed capacities to meet the growing healthcare demands. Government hospitals in towns and district headquarters are planning to either upgrade their existing diagnostic and laboratory facilities or create new facilities.

The healthcare industry is one of the beneficiaries of India's economic liberalization. A rising middle-income group of the Indian population is going through a change in attitude towards healthcare. This group spends money on preventive care and annual health check-ups. The Indian middle-income group demands the best healthcare products and services. They prefer to visit multi-specialty private hospitals, even if they have to pay for this service from their own pockets. Increasing per capita expenditures from this rising group is expected to support the growth of Indian healthcare industry.

An estimated 60% of health expenditure comes from the "self-paid" category. A majority of Indians are not covered by medical insurance programs but the people are willing to spend for healthcare services. Private health insurance companies are expected to change this scenario and bring more people under insurance coverage.

A Central Bureau of Health Intelligence study confirms that a majority of Indians, particularly those in the middle and high-income groups, have more confidence in healthcare products and services offered by private hospitals than those offend by the government-owned healthcare agencies. Although private sector healthcare services are about 60% more expensive than the government hospitals on an average, there groups are willing to pay for private sector services.

In India there are a large number of manufacturing units producing a diverse range of medical equipment but Indian hospitals continue to import high-end medical equipment. Leading international companies such as General Electric, Siemens, Bayer, Boston Scientific, Wipro-GE, Network-Pickers, Phillips Medical Systems, and Toshiba have expanded their operations in India and established manufacturing facilities to assemble equipment such as ultrasound scanners, mobile X-ray units for the domestic market and for export sales. Manufactures of sophisticated systems like Ultrasound scanners and CT scanners in India have been successful in the market. Systems like multi parameters, ICCU, heart/lung machines, linear accelerators, doppler ultrasound machines, MRI scanners and other diagnostic and therapeutic equipment are showing good market potential.

The biggest market segment, constituting 40 – 45% of the total market, is for imaging systems including X-rays, CT scanners and MRI machines. Companies supplying imaging equipment in India include Siemens, Wipro-GE, Phillips and Indchem ATL, Network-Pickers, Toshiba-STM and Toshniwal. The second biggest segment of medical equipment is cardiology-related equipment. Large number of small and large players such as Hewlett Packard, Indchem, Larsen & Toubro, BPL, Hinditron, Toshbro and Torrent cater to this segment.

The GOI allows imports of medical equipment and has lowered customs duties, which range from 0-20%. Critical equipment like surgical microscopes, MRI scanners, surgical lasers, digital subtraction, angiography systems, are bought under the zero duty import category. Major imports in terms of volume and value are in the highly specialized equipment category like body scanners, ultrasound scanners, specialized portable and non-portable X-ray machines, and implantable pacemakers, radiography and radiotherapy equipment.

The following is a list of most promising sub-sectors, with 2002 estimated market size of each sub-sector:

Sub-sector	Market Size ($ million)
Medical Imaging Equipment	201
Cardiology Equipment	125
Laboratory Instruments/Supplies	75
Cancer Diagnostic & Treatment Equipment	75

INDONESIA

As the fourth most populous country in the world, Indonesia's market for medical equipment and supplies will show increased growth in the near term as demand for imported products strengthens. While the market for medical equipment and supplies had declined severely when the economic crisis hit the country in July 1997, since the last quarter of 1999 demand has begun to slowly recover. Imports of medical equipment and supplies increased in 2000 and medical distributors expect the market to continue to grow in 2001.

Over 90% of medical equipment and supplies are imported. Total imports of medical equipment and supplies grew from $108.6 million in 1999 to $136.9 million in 2000. U.S. products accounted for 9.2% of all medical equipment and supplies imported by Indonesian in 2000. The government's commitment to de-centralize power and to increase the decision-making role of local governments will have a significant impact upon this sector.

The competition in the medical market is very

high. The key players in the market are by rank of imports, France, Netherlands, Austria, the United States, Japan and Germany. Pricing is a key success factor in this business, followed by quality, reliability, after-sales service, effective promotion, and extensive distribution channels. Korea, China and Taiwan are new entrants in the local market with very competitively priced equipment.

IRELAND

The medical devices industry currently comprises 80 manufacturing companies employing 19,000 people. The sector is characterized by significant and continuing U.S. investment with 13 of the world's top 20 medical device manufacturers having significant operations in Ireland.

International manufacturers use Ireland as a manufacturing and sales base and export their output to European and worldwide markets. U.S. companies in Ireland include Abbott Laboratories, Boston Scientific, Stryker Howmedica Osteonics and Bausch & Lomb. Many companies operate in niche sectors with predominant activity centered on non-powered passive devices. Sub-sectors include interventional products, orthopedics, implants, vision, dental, hearing and disposable products.

Indigenous manufacturers are primarily small-scale companies producing disposable products, however an increased interest in hi-tech products and R&D is rapidly emerging. The government of Ireland has pledged over $363 million to support a range of projects to develop research and development infrastructures, provide training and facilitate technology licensing and industry development.

Future development plans for the Irish healthcare sector have been announced in the form of the government's National Health Strategy Plan 2002 – 2011 with a total of $6.6 billion being set aside for capital expenditure and $4.4 billion for current spending. However, execution of the plan that includes the provision of more than 2,000 public beds and the development of one-stop primary care centers is largely dependent on exchequer revenues and tax receipts during the lifetime of the plan.

The U.S. dominates the import market as U.S. medical devices and equipment enjoy a strong reputation among Irish medical personnel. Most promising sub-sectors include medical instruments, disposable medical products and electro-medical apparatus. Major opportunities also exist for sub-supply companies as manufacturers increasingly source from the local market.

ISRAEL

The Israeli medical equipment market continues to present significant opportunities to U.S. exporters. Estimated at $520 million annually, over three-quarters of this market is imported. U.S. industry holds a strong position, accounting for over 50% of total imports. Israel's mandatory National Health Insurance (NHI) provides a basic package of health services to all Israeli citizens regardless of age or medical condition. It defines a comprehensive list of medical services to which each citizen is entitled. Demand for high-end medical equipment and supplies have been growing due to advances in medical practices and the constant addition of new procedures to the NHI. This market is considered stable with a natural annual growth of 4%. Israel presents U.S. companies with good opportunities in diagnostic equipment, reagents and kits, computerized health care systems, imaging systems, cardiology equipment, and various disposable products.

ITALY

The Italian National Healthcare System (SSN) was established in 1978 to provide essentially free medical care to all Italians. Thus, the SSN is by far the major healthcare provider in Italy. The Ministry of Health, through triennial national health plans, establishes the fundamental objectives of healthcare, including preventive care, therapy and rehabilitation. It defines the level of healthcare guaranteed to all citizens and issues guidelines for the organization, delivery and

funding of healthcare services paid by the SSN. The 20 Italian Regions, which have the primary role in setting and implementing healthcare policies, are responsible for developing regional health plans and for organizing and delivering healthcare services through local "Health Units". The SSN receives its funding through the National Health Fund, appropriated every year through the Government of Italy's budgetary legislation.

Public hospitals account for 75% of total expenditures for medical equipment and products, with the balance being held by private healthcare facilities. In addition, the SSN purchases a significant portion of healthcare services from private providers. The SSN has jurisdiction over 196 large hospitals and 599 medium and small size hospitals, which are managed by 197 Local Health Authorities. The total number of beds in the public sector is 220,932. In addition, public healthcare manages 7,079 outpatient facilities, 1,506 residential facilities for eldercare and 4,794 other healthcare facilities.

The private healthcare service providers account for 637 private and independently operated clinics, with a total of 60,000 beds. The latest trend shows an increase in the number of private healthcare facilities over public hospitals.

The Italian market for medical equipment relies heavily on imports. Major suppliers are the United States and Germany. Domestic production is limited in sophisticated and hi-tech medical equipment and products, those for which investments in R&D are of critical importance. Local production is good in such areas as radiology, dental and ultrasonic equipment. A large percentage of medical equipment in use is obsolete, with potentially adverse effects on patients. Recently, the SSN has altered its budgetary policy and authorized an increase in capital goods expenditure. As a result, the market for medical equipment has improved and the future is more promising in terms of business opportunities. Prices are considered to be the primary factor in purchasing decisions. Effective June 1998, Italy has implemented a special certification program, known as CE mark, which is an EU-wide certification standard covering the majority of medical products, equipment and services.

JORDAN

Jordan is striving to become a medical hub for the Middle East, attracting patients from many parts of the Arab world who travel to Jordan for relatively high-quality care at comparatively inexpensive rates, and is constructing modern state-run and private hospitals and other medical facilities. In 2002 the number of private hospitals rose to 62 with 3 other hospitals to be registered with the Ministry of Industry and Trade.

In addition, as Jordanian industry modernizes and private consumption increases, demand for U.S.-made capital goods will remain strong. Competition in this sector comes from European and Asian producers.

Sales of medical equipment and services by foreign suppliers are expected to continue to increase during 2002-2006. The MOH plans to continue to invest on hospital infrastructure throughout the country with a variety of equipment including sophisticated laboratory diagnostic, laboratory reagents, testing equipment, cardiology equipment, hospital furniture as well as other laboratory equipment.

In 1999, the size of the market for medical upgrades was estimated at $7.7 million, while the Jordanian market for medical equipment and supplies was estimated to be $80 million. Note: in Jordan, the length of the replacement cycle for medical equipment is relatively long (approximately 12-15 years), compared to Western countries, which partially explains the low market-size estimate.
Attractive projects expected to come on line within the next five years in the private and public sector include Prince Hamzeh Hospital/ MoH - 450 beds, Drugs Quality Control Laboratories/ MoH, Queen Alia Heart Institute extension/ Military - 70 beds, Al-Bashir renovation and remodeling/ MoH - 850 beds, Pediatric Children's

Hospital-National One/ Military, and Wadi Saqra Consulting Hospital/ Private - 105 beds.

KAZAKHSTAN

Kazakhstan's medical equipment and supplies market started to rebound sharply in 2002. This is the result of pent-up demand in the country after many years of inadequate healthcare budgets. President Nazarbayev declared 2002 "The Year of Health." The national healthcare budget for 2002 was raised by 19% to Tenge 65.8 billion ($425 million), which is about $28 per capita for population of 15 million. In Kazakhstan, 83% of the existing 3,000 hospitals and clinics are public. Many of them are in poor condition and need to replace outdated equipment. Clinics administered by the Ministry of Health plan to give treatment to about 38,500 patients. They will receive $6.3 million from the state budget to purchase new medical equipment. Other public hospitals and clinics receive funding from local budgets, the amount of which varies from region to region.

The Kazakhstani market for medical equipment and devices including dental equipment and supplies in 2002 is estimated to grow about 6%. The market in Kazakhstan is dominated by imports that account for 95% of the total market. The U.S. holds 10% of the total imports in 2001 of medical equipment and devices in Kazakhstan. Imports from the U.S. in 2002 are estimated to grow by 2%. Other major suppliers of medical equipment and supplies are Germany (25% of total imports), Russia (24%), and Japan (16%).

Total local production of medical equipment and supplies in Kazakhstan accounted for 5% of the total market, and is estimated to expand further in 2002 due to the government's support for local production and its Import Substitution Program. Local small businesses produce surgical supplies, but their output cannot cover the demand for medical disposables in the country. One large producer of X-ray equipment in Aktobe exports its products, worth $1.7 million, mostly to Russia.

The market is very receptive to U.S. medical devices due to their better quality, versus cheaper medical devices from Russia. The main competitor to the U.S. is Germany, with its high-quality medical products and closer proximity to Kazakhstan. Options for after-purchase service and training for users of medical equipment can considerably influence end-users' purchasing decisions. Certain types of devices must be adapted for Russian-language users and for the 220-Volt electrical system. The best sales potential for U.S. medical equipment in the coming years is expected to be in the following areas: electro medical diagnostic and therapy equipment, diagnostic imaging with a special emphasis on X-ray equipment and supplies, surgical supplies, dental equipment and supplies, test kits and laboratory equipment, and medical furniture.

KUWAIT

The Government of Kuwait provides free medical service to its citizens. It operates 7 regional hospitals, 17 specialized hospitals, and more than 54 infirmaries throughout the country. Naturally these hospitals and medical centers offer a wide range of services, from preventative care to operations. In April 2000, the National Assembly passed a health insurance requirement for expatriates, charging minimal fees for medical services. In order to contain costs, the Ministry of Health granted three licenses to the private sector to build hospitals dedicated to the treatment of expatriates. This activity will offer excellent opportunities for American companies that supply medical equipment and supplies, hospital management, and specialists.

LEBANON

Lebanon has an active health sector that employs 20,000 people and 4,000 doctors. 135 private hospitals and 24 public hospitals compete for the provision of the best equipment to the extent that some are over-equipped. 33% of the medical equipment has originated from the U.S. in 2001, and 44% in 2000. Imports of medical equipment have increased by 31% between 2000 and 2001.

MALAYSIA

The Government of Malaysia has allocated RM 5.5 billion ($ 1.4 billion) to further develop Malaysia's health services during the Eighth Malaysia Plan (2001-2005). This is an increase of 47.3%, over the previous 5-year plan's allocation, reflecting the importance given to the development of the health care sector. 95% of the budget will go to medical care service development, specifically on financing the on-going construction and provisioning of new hospitals and clinics.

The Government has been the major player in the health care system. Malaysia is still contemplating implementing a national health insurance program. No decision has been reached yet, though a public health insurance system could be the answer to ease the government's burden of financing health care in order to enable all levels of society to receive adequate treatment.

The growth of the private sector has stimulated the move of senior doctors and specialists from government hospitals to better-paid private sector positions, causing an imbalance in the supply of senior doctors in government hospitals. This makes it difficult for public sector healthcare to maintain staff. In 2002, it was reported that 58% of the country's medical personnel were serving in the private sector, servicing only 20% of Malaysia's hospital beds. One way to increase manpower resources is through developing more private medical colleges. At present there are only four private medical colleges in the country: Perak College, International Medical University (in Petaling Jaya), Malacca Manipal College, and Penang Medical College. All have twining programs with world-renowned medical colleges.

On the tele-medicine front, all four pilot tele-medicine projects under development as part of the Multimedia Super Corridor (MSC) initiative and begun in 2000 are scheduled for completion by 2004. These pilot projects should reduce the national healthcare bill by as much as 20%, once they are fully operational.

The implementation of IT applications and new technologies in medical care delivery will be emphasized in the construction of new hospitals. Currently, Malaysia has about 120 existing district hospitals, of which only 14 have patient management and billing systems. Besides hospitals, there are over 3,000 primary care healthcare centers. The construction of 33 paperless public hospitals was included in the Seventh Malaysia Plan. Due to the economic crisis in 1998, these projects were put on hold but are expected to be implemented during the Eighth Malaysia Plan. As of 2002, two of the hospitals have already been completed and are fully operational. Putrajaya Hospital, which cost approximately $74 million, is the second paperless and fully digital smart hospital built in Malaysia (after the initial Selayang Hospital). The third hospital of this type will be completed and fully operational by early 2003. Eight of the new hospitals will implement Total Health Information System (THIS). These hospitals will be located in Alor Star, Sungai Petani, Ampang, Johor Bahru, Sungai Buloh, Serdang, Shah Alam, and Temerloh. The remaining 25 smaller hospitals (such as those in Lahat Datu, Sabah and Pekan, and Pahang) will implement a scaled-down Hospital Information System (HIS). It is expected that Malaysia will have ten fully digital hospitals by 2004.

Those over 65 currently make up only 6% of Malaysia's population, but the numbers are growing rapidly. The predicted growth rate of the elderly population is expected to increase 11.3% to 3.2 million by 2020. Expansion of existing facilities and new investment in rehabilitation and geriatric institutions are essential to meet future healthcare needs. The Ministry of Health is primarily focusing on developing new geriatrics treatment centers, as U.S. influences are beginning to affect Malaysian healthcare practices. There will, therefore, be an increasing demand for the establishment and operation of nursing homes in the future.

Pharmaceutical sales are estimated at $340 million. Malaysian companies have about 20-30% of the market. Many Malaysian pharmaceutical companies are expected to further venture into

other areas of the healthcare sector, such as the manufacture of medical devices for both local and export markets. This shift in industrial organization and product expansion creates opportunities for foreign firms to participate in partnerships and joint ventures with Malaysian companies in this sector.

Biotechnology will also be emphasized as an integral part of the GOM's healthcare research and development (R&D) programs. $420 million has been allocated for biotech R&D under the Eighth Malaysian Plan to support the development of "BioValley Malaysia". Three new national bio-technical institutes dedicated to genomic and molecular biology, agricultural biotechnology, pharmaceuticals, and nutraceuticals will be built during the next few years and will form the core research institutes of BioValley Malaysia. In addition to these core institutes, numerous existing R&D institutions, universities, and clusters of biotechnology companies will encompass BioValley Malaysia. A new BioValley Malaysia Business Development Directorate will also be established to help facilitate the transfer of research findings from the laboratory to the marketplace. BioValley Malaysia is expected to create 17,000 jobs, 250 new companies, and attract $13 billion in investments.

Nearly all medical equipment, instruments, and supplies are imported. The main exporters are the U.S., followed by Japan and Germany. All medical products are exempt from customs duties, as the GOM still has not imposed customs regulations on medical devices. However, the Medical Device Act is in the final stages of approval and is expected to be passed and implemented soon. Certain high-tech medical equipment, such as x-ray machines and equipment that uses lasers is subject to stringent pre-purchase evaluation by the Ministry of Health's Health Technology Assessment Unit.

MALTA

U.S. companies are considered world leaders in the supply of pharmaceuticals as well as hospital and medical equipment. Several leading U.S. companies have succeeded in selling their products to government hospitals and private clinics. In addition, work on the enlarged San Raffaele Hospital is at an advanced stage. The project is estimated to cost some $250 million, and should provide excellent opportunities to appropriate U.S. suppliers.

MAURITIUS

There are 200 private drugstores and seven wholesalers of pharmaceuticals, medical equipment and consumables in Mauritius. The government currently has 12 hospitals but has budgeted for 3 more to be built within the next few years.

Mauritius imported over $28 million of pharmaceutical products and $8 million of medical equipment and supplies in 2000. France is the main supplier of pharmaceuticals, with 30% of the market, followed by U.K (14%), India (12%), South Africa (11%), and Switzerland (8%). Imports from the United States are less than one% but some European imports originate from U.S. subsidiaries. Medical equipment and consumables are imported from U.K. (14%), South Africa (10%), Germany (9.6%), India (9.4%), France (7%), and the United
States (5%).

An annual tender for pharmaceuticals -- valued at $10 million -- is issued every October. Another tender for medical disposables and dressings (estimated at $3.5 million) are issued annually in April/May. Tenders for medical equipment are issued as and when required. The government's average annual purchase of medical disposables and equipment is estimated at $4 million. U.S. suppliers interested in these tenders should contact: The Permanent Secretary, Ministry of Health, E. Anquetil Building (5th Floor), Port Louis, Mauritius. Tel: (230) 201-1912; Fax: (230) 208-0376. The private clinics' annual medical supplies and equipment needs are estimated at $4 million. They normally purchase through local agents.

Mauritius Pharmaceutical Manufacturing Ltd is the only company manufacturing tablets, capsules, ointments, and liquids for the local market. Although their total production capacity is valued at $2 million, they are currently producing at only 55% capacity because their contract with the government lapsed in 1998 and they now have to compete in the annual government tender for pharmaceuticals.

In its 2001-02 Budget, government has made provision for the payment of two CT scans, one Magnetic Resonance Imaging (MRI) machine, 32 dialysis machines and one digital angiography machine. The MRI contract ($1.5 million) was awarded to GE Medical Systems while the CT Scans ($760,000) will be supplied by another U.S. company Marconi Medicals. The Ministry of Health also recently ordered one Radio Therapy Cobalt machine ($700,000) from Belgian firm MDS Nordion but to be supplied out of Canada. The contracts for the angiography and dialysis machines have not been awarded yet.

MOLDOVA

A $20 million program for modernization of Moldova's health facilities sponsored by the World Bank and the Government of Netherlands over a five-year period was recently approved by the Moldovan Parliament. The project involves hospital renovation, purchase of ambulances, and supply of medical equipment.

NETHERLANDS

The following statistics underline the potential of the market for electromedical equipment in the Netherlands: Healthcare expenditures are currently at 10.5% of GNP. Per capita annual spending on healthcare is approximately $2,200.

Annual sales of electromedical equipment in the Netherlands was estimated at $2 billion in 2001. Around 100 companies generate this turnover. Eight% of sales is accounted for by specialized Dutch manufacturers. Specialized technical trading companies that import and produce equipment generate another eight%. The remaining 84% of sales is generated by imports. In terms of product breakdown, 47% of sales is attributable to equipment and installations (large and small-scale capital goods), 46% comes from instruments, reusable and disposable goods, while seven% is generated by the provision of services. In the area of diagnostics, advances in technology have accompanied a shift towards less expensive, more accessible diagnostics.

As the home market is relatively small in the Netherlands, a major percentage of total production is exported – 78% in 2001. Examples include equipment for diagnostic imaging, physiotherapy, radiotherapy, cardiovascular products such as pacemakers and angiography catheters and apparatus for extra corporeal blood treatment.
Dutch medical technology importers are highly specialized, both in terms of product knowledge and understanding of the Dutch healthcare system. Most promising subsectors include medical imaging equipment, implantable electronics, biosensors, medical lasers, radiodiagnostic devices, biosensors and biocompatible materials, and microsurgery products.

NEW ZEALAND

New Zealand's health system is comprised of public, private and voluntary sectors that interact to provide and fund health care. Presently over 78% of health care is publicly funded, and the Ministry of Health forecast total health budgeting for 2003 to be $3.41 Billion. New Zealand's total health expenditure as a percentage of Gross Domestic Products was 8.5% in 2000, and the total publicly funded expenditure was 6.6%. Previously, the public health system has been expected to meet the health care needs of all New Zealanders. Major hospital expansions, upgrading and redevelopment is currently being undertaken in the countries most populated areas, Auckland and Wellington, thus requiring medical equipment and services.

The private sector, which including private households (19.9%), health insurance (6.2%) and voluntary/not for profit organizations (0.4%) has expanded its role in provision of medical care to

New Zealanders, increasing from 11.9% to 22.5% in 20 years. The increased use of privately funded facilities provides additional opportunities for those exporting American medical products.

The number of New Zealanders over 65 years old increased to 450,000 in 1999. It is projected that the figure will more than double to 1.8 million in 2051. The health care needs of this age group will incorporate facilities such as retirement villages and private residential homes and on site hospitals that will require not only medical services but also medical equipment. The local market offers many opportunities for American manufacturers and service providers as approximately 50-60% of product in this sector is imported from the United States.

NIGERIA

Nigeria still depends on imports for most of its medical equipment needs. Local production is limited to peripheral items such as hospital beds and gurneys.

Health care in Nigeria has been denied the critical attention due to it for several decades. Successive governments have neglected the primary, secondary and tertiary health services in spite of the volume of information available to them on the state of health care at all levels. Several policies have been formulated without a corresponding infusion of funds. The program has consisted mainly of lofty speeches and data that do not translate to better health service.

Just as in former years the health sector has remained almost stagnant. The vision of Health for All by the Year 2000 has remained a cliché, as there has been very little visible improvement in this sector. Even the imports in drugs/pharmaceuticals were faulted as it was reported that most of the products imported had expired or were shortly to expire. Worse still was the exposure of facilities and companies that were involved in the manufacture and importation of counterfeit drugs. However, with recent change in the leadership of the National Agency for Food and Drug Administration and Control (NAFDAC) many of these firms have been identified and shut down with applicable penalties imposed.

The Government of Nigeria maintains that Primary Health Care remains its priority. The government also states that secondary and tertiary health care will be strengthened via effective and well-coordinated referred systems. The federal government will not be solely responsible for primary health, but will support the states in an effort to bring the primary health care closer to the people. The GON also restated its commitment to the resuscitation of the health care delivery system through systematic funding and mobilization in line with the Bamako Initiative Program, a series of reforms in response to the deterioration of public health systems in developing countries. Regrettably, the government's budget allocation to health is about 5 per cent of the total national budget, which puts it far below the World Health Organization's minimum recommendation of 15% of the total annual allocation.

The National Health Insurance Scheme (NHIS), first proposed about 30 years ago has finally become a reality. The NHIS is aimed at generating resources for health care delivery as well as providing access to quality health care delivery.

Other categories that have been given high priority include the intensification of non-curative components of primary health care like Sanitation Health Education, national preventive campaigns against childhood diseases and free compulsory immunization programs.

HIV/AIDS has been identified as a growing problem in Nigeria. The GON has expressed concern about this looming menace as it could have a devastating impact on Nigeria's growth and poverty alleviation efforts if it remains unchecked. Officially the rate of HIV infection in Nigeria is about 5.8%. In reality an estimated 3.2 million Nigerians have tested HIV/AIDS positive. The Federal Government has established a Presidential Action Committee on AIDS (PACA), headed by the Vice President and key line ministers as members. It is estimated that the government would need about $63,000,000 to combat Aids in

Nigeria. This would include substantial purchases of drugs and HIV/AIDS-related test kits.

Despite the return of Nigeria to democratic rule, the economy has been stagnant and inflation rate is on the rise. There is no doubt about the increasing demand for medical services and equipment such as analytical and examination instruments, ultra sound scans, anesthesia equipment, mortuary and laboratory equipment. In addition to government this year, the private sector participation as in previous years will account for much of Nigeria's imports. The national currency the Maria is still falling, consequently limiting the purchasing power of the average Nigerian. As in the previous years, it is envisaged that refurbished and used medical equipment will remain in high demand.

NORWAY

The health and social welfare system in Norway is predominantly publicly financed, mainly by a national insurance tax. The national insurance, or social security, is a collective insurance plan to which all in Norway belong. Persons who fall ill in Norway are guaranteed medical treatment and user fees are limited – no one pays more than $150 per year for public health services (not including dental care costs, which adults must pay on their own).

An increasing amount of public resources are spent on the health sector. Norway spends about $6.5 billion annually on hospitals, making it one of the European countries with the highest level of public spending on the health service per capita. According to the Norwegian Ministry of Health there are currently development projects with investment totaling $4 billion in the Norwegian health sector. Since the middle of the 1990s, growth in expenditure has risen by about 5% in real terms – on average twice as high as in the rest of the public administration.

Norway has a small population and is sparsely settled. The country has five health regions, 19 counties, and 435 municipalities. Each is responsible for its part of the health service. As of January 1, 2002, the Norwegian central government took over responsibility for all the public hospitals and placed them under the management of five regional health enterprises. The 85 hospitals are now operated as health enterprises, wholly owned by the central government. The takeover of responsibility for all the hospitals marked the end of a 30-year old tradition of hospitals being owned and run by the counties. There are currently 5 larger regional and about 80 central/local somatic hospitals in Norway. The 5 regional hospitals are located in Oslo (2), Bergen, Trondheim, and Tromso. All in all about 350 institutions in the central government specialist service (including psychiatric institutions, the ambulance service, etc.) were transferred to the central government sector.

There are approximately 1-2 clinical facilities in each county, under the supervision of a regional or university hospital. Each regional hospital includes a medical, surgical and emergency section. In the larger regional hospitals one finds the more sophisticated and higher-technology medical equipment.

In addition, there are some 20 smaller private medical centers providing acute surgery and limited medical treatment operations. Competition is strong among these clinics, and the best and most modern equipment and services will always be of interest. Since there are bottlenecks and waiting lists (often long) in the national health care system, there will always be a market for private medical clinics to provide services to individuals or groups who are able to "buy" themselves away from the waiting lists of the national health care system.

The bottlenecks may also provide service opportunities. There has been a strong growth in the number of health care professionals, but an apparently greater lack of health care professionals than ever before. For example, Norway is critically short of nurses because of low pay (recently addressed partially through a significant salary increase) and is importing them. About

4000 additional nurses and auxiliary nurses are needed. This equals a shortage of perhaps 250,000 in the U.S. In the 1990s, the number of physicians grew by 50% in terms of man-years, while nursing man-years rose by 45%. Methods or special equipment that would increase service quickly at low cost could find a receptive audience in the government.

In 2001 Norway allocated funds over the national budget (about $135 million) for the National Insurance Administration to send patients on waiting lists abroad for treatment. A substantial part of this amount has been rolled forward to 2002. This special project is managed by the National Insurance Administration and has in principle been open to any foreign health care provider that can document meeting the standard and type of service required.

Increasingly sophisticated diagnostic methods and highly specialized treatment methods are being developed. Telemedicine and biotechnology are improving and both represent areas of focus. Within telemedicine the GON expects significant potential for radiology (e.g., work sharing among hospitals), specialist consultations within the ear-nose-throat field (e.g., video conferencing), specialist consultations in dermatology (e.g. video conferencing and still picture technology), and cardiography (e.g., heart rhythm/sound comparisons). Telemedicine is seen as an important part of future acute medical care. Internet access in Norway ranks among the highest in the world and about 80% of the population have access to cellular phones. For a small population with remote settlements, telemedicine presents a real opportunity to provide better services at lower costs.
Norway has come relatively far in developing and utilizing statistics and medical data, and continued efforts are expected along these lines. The same can be said about the development of information technology to support these activities.

Demographically, Norway is growing older. In particular, the oldest segment of the population is expanding; this represents an extra burden for the health care system. Nursing and care for the aged must be given higher priority. Indications are that there will be growing opportunities for private initiatives in these areas. Around 40% of population aged 67 and above require and receive help in the home, while 8% live in a nursing home. Social security also provides dysfunctional persons with support for medical expenses, practical help and care at home, the acquisition of mobility and other aids, and if necessary, even specially equipped cars.

There are about 2,300 private practicing dentists in general dental clinics in Norway. In addition, there are about 280 private practitioners with dental specialties, and about 300 dental technicians in Norway. The Public Dental Health Service employs about 1,000 dentists. In Norway, private practitioners mainly provide dental care for adults. They obtain their income from fees paid by their patients. People 20 years and older meet nearly all their own costs for dental care. There is no subsidy scheme for adults. Until 1995, there was a fixed fee schedule for dental care. The fee schedule was then abandoned, and market forces have since determined fees. The number of group dental practices in Norway is expected to increase, primarily due to the trend toward private practitioners wanting more flexible work arrangements.

The GON has comprehensive plans to modernize old equipment currently being used in many major hospitals in Norway. These investments always depend on the national budget situation and may be subject to revision and cost cutting in several areas.

The Norwegian health care system spends a lot of money. Its equipment is often state of the art. This will continue to be true, so Norway remains a good market for medical equipment. It is looking, however to get more for its money. A major part of the objectives for the central government as hospital owner is to reduce the bottlenecks in the system, to coordinate procurement and hospital development projects, to improve management, to improve utilization of buildings and facilities, to strengthen information technology in the health service, and to reduce the differences in services

offered. Equipment and services that make health care services more efficient and effective will find a market.

The most promising subsectors for U.S. suppliers of medical equipment and supplies include surgical instruments and equipment, diagnostic apparatus, orthopedic equipment, medical disposables, monitoring instruments and equipment, and laboratory/pathology instruments and equipment. Best sales prospects for U.S. dental suppliers in Norway include general dental, surgical and laboratory supplies and materials, and advanced technical and electronic equipment, such as digital x-ray systems.

OMAN

The Omani market also offers good prospects for exports of U.S. health care products. Having completed major regional hospital construction in the last five year plan, Oman's current emphasis is on upgrading facilities, including diagnostic abilities and operations theaters, rationalizing services provided at its principal hospitals while continuing to extend its rural clinic network. The current five-year plan contains 39 major projects in this area and 151 new rural clinics. The five-year plan includes $56.6 million development expenditure for the health sector. Nearly 12% of the Omani government's budgeted expenditure is in the health sector. Oman's 2002 budget indicated that the ministry of health's capital expenditure is estimated at $14 million. The two main projects for this year are a state of the art oncology center and a video network that links operating theaters in Oman's major hospitals together. It also indicates that the Omani government expenditure in this sector is around $360 million.

The Omani national population is growing at around 3.8% annually and the existing system is overburdened and in need of expansion. The Government's determination to provide its citizens with basic health care means that the demand for health care products and health-related expenditures will continue to grow. It seeks to shift expatriate care to private hospitals and clinics, which also are beginning to compete with the almost free state hospitals and prestigious foreign hospitals for the upper middle Omani market. Furthermore, the Ministry of Health has expressed particular interest in U.S. health care management information technologies, as part of its efforts to standardize operations and establish interconnectivity among Oman's 150 hospitals and regional clinics. The U.S. was the leading exporter of medical, surgical, dental and veterinary appliances (H.S. Code 90189000). Of Oman's $7 million market in this category, the U.S. captured 29% in 2000, with exports in this category valued at approximately $2 million. The total Omani market for medical equipment in 2000 was $19.3 million, and the U.S has captured 20% of it with a total export value equal to $3.9 million.

PERU

Peru spends approximately 4.8% of its GDP in the healthcare sector. About 40% of the healthcare sector is serviced by the hospitals administered by the Ministry of Health, 20% by the social security institute (ESSALUD), 3% by the armed forces hospitals and 12% by the private sector. The remaining 25% of the population do not use any type of service. The main objective of the Ministry of Health is to focus on prevention education, and reduction of infant and maternal mortality. The Peruvian market for medical equipment and devices is supplied almost entirely by imports. Imports have grown from $42.9 to $66.9 million in 2001 (56%). This demand will decrease in 2002 due to lack of new investments in the healthcare sector. It is expected that for 2003 the demand will at least reach 2001 levels. The United States is recognized as one of the leading suppliers of medical equipment and devices. Most of the end-users are familiar with the quality and after-sales services of U.S. companies; however, European and Japanese suppliers are continuously gaining market share with aggressive campaigns. Local production is limited to suppliers of furniture, and some small manufacturers of sterile cotton and gauze.

PHILIPPINES

Despite numerous economic crises – the global impact of the September 11 bombing in the U.S. East Coast, destabilization efforts against the government that kept investors at bay, and the continuous rankling of political opposition groups (traditional politicians and leftists) – the medical industry has had a long and hard recovery, notwithstanding a 3% drop in importation of medical equipment. Total market size in 2001 was $70 million.

Industry insiders are optimistic about a 10% growth this year due to increasing demand for medical equipment and other medical products by expanding medical facilities, offering excellent opportunities for U.S. suppliers. Continuous requirements for medical services, new technology, and equipment replacement should spur market growth. U.S. market share is 30%. Japan and Singapore follow with 13% each. Importers of medical equipment agree, however, that import data on Singapore are actually transshipments from the U.S., Europe and other Asian countries, including Japan. The market shares reflect Philippine preference for U.S. products. Third country suppliers, however, are giving U.S. products increasing competition.

The U.S. is strong in the following subsectors: Electro-medical equipment; ozone therapy apparatus and electro-diagnostic apparatus. Major U.S. medical companies in the Philippines are GE Medical, Johnson and Johnson Medical, Lifecare, Invacare, Parker, Bird, Becton Dickinson, DePuy, etc. Non-U.S. competitors are Siemens, Mannheim, Philips, Hitachi, Toshiba, Shimadzu, and Olympus.

POLAND

The health care services market in Poland offers opportunities for U.S. companies. With a population of nearly 40 million, Poland is the largest healthcare market in Central Europe.

Since the beginning of 1999, Poland has been adapting to a new healthcare system in which the functions of payer, provider and administrator have been separated. The aim of the new scheme is to provide equitable healthcare services based on a system of universal health insurance. In line with Poland's policy of delegating power from central to local control, healthcare is now the responsibility of sixteen regional Sick Funds and an additional branch for uniformed military personnel. Each Sick Fund purchases the healthcare services needed for its members (the residents of that region or, in the case of the Branch Sick Fund, uniformed employees of the relevant institutions) from licensed providers. The new system is expected to create a solid foundation for the development of private healthcare services, including the potential of introducing private health care providers.

The health system in Poland consists of public hospitals and outpatient clinics that provide free services, and a slowly growing private sector. In 2000, there were 715 (699 public and 16 private) general hospitals operating in Poland with 198,000 available beds. About 5.5 million Poles were hospitalized in 2000. The average hospital stay was nine days. The most common causes of death in Poland are cardiovascular disease, cancer, injuries and accidents. Contagious diseases, especially tuberculoses and hepatitis, are still an important concern. About 24% (9.5 million) of the population is retired, and another 11.5% (4.5 million) are considered handicapped. These groups are the biggest consumers of healthcare services in Poland.

Private medical firms (Polish and foreign) offer health care services for individuals and companies. These companies provide basic medical services internally, while contracting some or all specialized services with third parties. They cooperate with specific hospitals to provide clients with hospitalization services. As Poland's economy continues to improve and health reform is fully implemented, it is expected that consumers will increasingly turn to private health care companies. This will open significant market opportunities for American health care service providers.

PORTUGAL

Despite the on-going changes in the Portuguese Government, the health care sector continues to be a priority. During the past four years many new hospitals were built and existing ones renovated. New hospitals will continue to be built and existing ones will be upgraded and renovated until all European Union standards and requirements are met.

The Portuguese market for medical equipment, instruments and supplies grows with the continuous demand for innovative instruments and apparatus. Although the U.S. is not the number one supplier to Portugal, it continues to be perceived as a preferential supplier of dependable top quality products. By the end of 2003, nine new hospitals will be built in Portugal. As the health care sector upgrades during the next four years, the Portuguese market for medical equipment, instruments and supplies is expected to grow at a steady rate of 7%.

In 2002, Portugal has still not yet met all standard requirements imposed by the EU. The massive infusion of EU structural funds has maintained a faster economic growth in this sector compared to other sectors and compared to other EU countries. The medical sector is one that has benefited from this infusion of funds. The continuing construction of new hospitals and renovation and upgrading of existing ones has created an extraordinary market demand for all types of medical equipment.

There is EU harmonized legislation governing the importation of medical devices in Europe. As in other EU countries, it is required that medical devices imported from third countries being sold in Portugal undergo an analysis test by a credited entity in the EU. If devices pass this test, they are marked "CE" and may then move freely and be sold in all countries throughout the EU.

ROMANIA

U.S. exports cover about 35% of the Romanian import market for medical equipment. U.S. companies with a significant share of the market include General Electric, Hewlett Packard, Beckman Coulter, Stryker, ATL, Medtronic, Helena Laboratories, Diasonics, Control X, Gendex, Baxter, Denver Instruments, Bard Instruments, Accuson Corp., Johnson & Johnson, Space Lab, Bennett, Datascope, Steris, and 3M. Major competition to U.S. companies comes from German, Austrian, and Italian firms. To counter Western European competition, U.S. companies might consider establishing joint ventures and making direct investment, particularly by the acquisition of hospitals, health centers, clinics, or medical equipment factories that are slated for privatization.

Priorities for procurement of medical equipment include: electro medical equipment, diagnostic equipment, endoscopy, urology, laparoscopy and laser surgical equipment, medical lasers for skin therapy, orthopedics surgery equipment, dentistry equipment and microscopes for surgery and laboratory use.

Major procurement orders that are expected to be placed over the next 6-18 months include: equipment for the Bucharest Floreasca Emergency Hospital ($25 million); equipment and supplies for the Bucharest Fundeni hospital (about $28 million); equipment for the Aeronautical Medical and Training Center in Bucharest (about $7 million); medical equipment for the Eye-Treatment Hospital in Bucharest ($20-25 million); medical equipment for the Network of Laboratories for Preventive Medicine (about 30-35 million Euros); medical equipment for the National Program of Urology ($15-20 million), and equipment for the National Program of Digestive Endoscopy $10-15 million).

RUSSIA

In the last three years the Russian medical equipment and devices market has shown substantial and steady growth with annual rates

exceeding 10%. The total volume of the market is estimated at about 1 billion dollars. For comparison the U.S. medical equipment and supplies market in 2000 was 75 times larger and amounted to $75 billion, out of which $10 billion were spent for R&D.

In Russia medical equipment and devices are manufactured at 1,275 enterprises, including 32 specialized medical device enterprises controlling 60% of the total output, 300 defense plants and 900 small and medium enterprises having federal licenses for production of medical equipment and devices. A significant portion of high-tech medical equipment is still developed and produced at defense enterprises, which have traditionally had access to advanced technologies.

The 1998 economic crisis served as a spur for a number of Russian medical equipment and device manufacturers which, having taken advantage of the sharp rise in price of imported medical equipment, managed to increase their share in a number of market segments. Such segments include electrocardiographs, patient monitors, x-ray devices, anesthesia and pulmonary equipment, ultrasound scanners, devices and instruments for endoscopy and laparoscopy as well as electrosurgical instruments. Stronger positions were also achieved in home healthcare products, orthopedic devices, ophthalmic products, test kits, polymeric and glass medical products, disposable syringes and other disposables.

However in medical equipment industry subsectors, which have a large R&D component, use innovative technologies and automation Russia is behind the majority of developed countries. Such industry subsectors include high-end ultrasound equipment, computer and x-ray tomographs, angiography systems, devices for radial therapy, resuscitation equipment, functional diagnostic equipment, implants and prostheses, robotics clinical laboratory systems for express microanalysis, telemedicine complexes, hospital equipment and supplies, operational room equipment, many types of home healthcare equipment and supplies, infusion and transfusion sets, IV solutions.

In general, imported medical equipment and supplies still play a predominant role and currently supply 71% of the total market. Despite the fact that the quality of some of the medical devices and supplies produced in Russia is highly improved, it is in many cases not up to comparable foreign products. Foreign-made high-end medical equipment, sophisticated medical devices and many medical products and supplies in the majority of cases do not have Russian analogs. The United States is the second leading supplier of medical equipment to the Russian market after Germany. Other important suppliers include Japan, Italy and France.

The best sales prospects in the Russian medical equipment, devices and supplies market include:

- high-end ultrasound equipment;
- computer and x-ray tomographs;
- angiography systems;
- devices for array therapy;
- resuscitation equipment;
- functional diagnostic equipment;
- implants and prostheses;
- robotics clinical laboratory systems for express microanalysis;
- telemedicine complexes;
- hospital equipment and supplies;
- operational room equipment;
- many types of home healthcare equipment and supplies;
- infusion and transfusion sets;
- IV solutions.

Russia still does not have a developed legislative basis for the medical device and equipment market. The Law on Medical Equipment and Devices has over several years been discussed in the Duma, the lower chamber of the Russian Parliament, but has not yet been adopted. There are a number of regulatory documents, including orders and instructions issued by the Ministry of Health of the Russian Federation, regulating different aspects of the licensing, registration and certification processes. However, the state registration, licensing and certification processes

need to be reformed to become less lengthy and expensive and more transparent.

SAUDI ARABIA

Saudi Arabia's health care market is large and growing. This growth is influenced by an increasing number of hospitals and clinics, as well as hospital expansions and upgrades, and the constant need for advanced equipment for both diagnostic and therapeutic applications. Currently, there are 314 hospitals, both general and specialized, with a total capacity of 46,000 beds in Saudi Arabia. The Ministry of Health is the largest provider of health care services with more than 185 hospitals and more than 1,700 health care centers. During 2001, the Ministry of Health invited bids for the management, operation, and refurbishment of the King Fahd Medical City, which encompasses four major hospitals (General, Pediatrics, Obstetrics and Gynecology, and Rehabilitation). The City has an inpatient capacity of 1,095 beds.

The latest figures reveal that there has been a drop in patient visits to public hospitals, suggesting a clear shift to private health care facilities. The private sector has heavily invested in the country's health care sector benefiting from shortages and delays at the MOH health care facilities. In addition, many patients also travel abroad for treatment. The latest published figures revealed that 134 patients were sent abroad, two-third to the United States through SAG funds. No figures are available on the number of privately funded treatments offshore.

SINGAPORE

Singapore's healthcare services are comparable to those of other industrialized nations. In 2000, Singapore's national healthcare expenditure was $2.73 billion or 3% of GDP. The government health expenditure per person was $420. Government hospitals account for 80% of the total number of hospital beds in Singapore. Singapore is renowned for its role as the healthcare hub for the region, treating patients from neighboring Malaysia, Brunei, Indonesia, Thailand and the Philippines. Singapore has access to a population of over 400 million in South East Asia and over 3 billion in the Asia Pacific region. The Singapore government is focused on moving up the value chain by building up services that assist research and healthcare delivery in Singapore and the region. With 23 public and private hospitals and six specialty centers, Singapore has the expertise in clinical research in various specialties. Pharmaceutical companies are increasingly relying on global drug development programs to speed up the drug development process.

Singapore's Health Sciences Authority (HSA) through its Center for Medical Device Regulation (CMDR) will be implementing a system of statutory control to safeguard the quality safety and efficacy of medical devices available in Singapore. The control measures, expected to take effect in the last quarter of 2002 or first quarter of 2003, will keep pace with global trends. It will take into consideration the regulatory decisions of benchmark agencies like the U.S. Food & Drug Administration, the U.K. Medicines Control Agency, Therapeutic Goods Administration of Australia and the European Agency for the Evaluation of Medicinal Products.

In 2001, U.S. exports represented 32% of total imports. The market contracted some 6.0% in 2001 as a result of the regional economic crisis. The market is expected to decline further in view of the depressed market conditions. However, the medical sector, identified as one of Singapore's pillars of growth, will see continued investment by the Singapore government. As such, U.S. companies with good medical technology would do well. Singapore distributors who handle regional markets are also poised to tap the growth potential of several regional economies as they recover from the crisis.

SOUTH KOREA

One of the largest Asian markets for medical devices, the Korean market was valued at $1.1 billion in 2001, and, according to industry sources,

is forecast to grow at an average annual rate of 10-15% over the next several years. As a result of strong growth in market demand during the period of 1999 through 2001, Korea's medical device market demand has returned to its pre-financial crisis level of 1997. However, one important factor which may slow the rate of growth in market demand over the next few years will be the nature of the measures that the Korean government decides to take to grapple with its approximately $3 billion deficit in the financing of the national healthcare insurance system. Notwithstanding the Korean Government's prospective cost-containment measures, Commercial Service Korea, in coordination with colleagues in the U.S. Embassy Seoul and government trade agencies in Washington DC, will continue to work closely with and advocate on behalf of U.S. exporters' market access concerns and will continue to encourage the Korean Government to make the market more transparent, to reimburse the users of innovative medical products at appropriate levels, and to ensure Korean patients' access to advanced medical devices and equipment. U.S. exporters of advanced and innovative products are urged to enter this challenging, yet potentially very lucrative and growing market.

Korea depends on imports for most advanced medical equipment, and imports from the U.S., the EU, and Japan dominate the market. Market demand for advanced and innovative medical supplies, devices, and equipment is forecast to remain strong over the next several years as Korea's hospitals continue to purchase technology-intensive products from abroad and as increasing numbers of elderly Korean patients require sophisticated medical procedures. In general, Koreans are increasingly expecting better care from their national healthcare system with a growing standard of living in the world's eleventh largest economy. Another factor favoring the use of advanced medical equipment, devices and procedures is the growing number of Korean doctors educated in the U.S. and Europe.

Reflecting these trends, following is a list of products that present the best export prospects for U.S. exporters: sterilizers, rehabilitation equipment, respiration equipment, orthopedic joints, diagnostic ultrasound scanners, magnetic resonance imaging systems, patient monitors, computer tomography scanners, catheters, artificial kidneys and dialysis machines, sutures, suture needles, general surgical instruments, operation tables, ophthalmic equipment, endoscopes, intraocular lenses, artificial heart valves and dental equipment and supplies.

Equipment and supplies for cardiac treatment and orthopedic devices represent about 50% of Korea's total market demand for medical devices. Demand for cardiac treatment devices grew at a rate of 15-30% annually from 1999 through 2001, outpacing overall market growth. As Korea's population of 46 million ages, the number of cardiac procedures is on the rise. In 2001, nearly 40,000 diagnostic and 13,000 therapeutic cardiac procedures were performed on Korean patients, and those figures are forecast to rise in 2002.

A major factor that may temper growth in market demand for all medical devices over the next few years is strong pressure on cost-containment in Korea's national healthcare system. As a result of this system's bankruptcy, the government has already launched some initiatives to reduce patient healthcare costs, including insurance reimbursement price cuts, and U.S. exporters need to monitor closely how these changes will affect their market potential. Reductions in price reimbursements have been set for many medical devices and standards for reimbursement approvals for covered medical devices have been made more stringent. At the same time, there are reimbursement proposals under consideration that will more appropriately recognize and reimburse for innovative products. The trend toward import substitution for basic medical supplies and some equipment, such as ultrasound diagnostics, is expected to increase. Although significantly behind the advanced technical capabilities of foreign competitors, the Korean medical device industry is increasingly investing in the production of more diverse electronic medical devices and biotechnology-based products.

SPAIN

The market for medical equipment depends heavily on imports, which represent approximately 85% of the total market. U.S. medical equipment is highly regarded by Spanish medical professionals and domestic importers/distributors. The U.S. is the main supplier to Spain with approximately 35% of total imports. Purchases of medical equipment are made predominantly by public health care sector institutions (85%). The private health care sector comprises the remaining 15%. Most public healthcare sector purchases are made by public hospital tenders. However, pre-selection among competing companies is a step made prior to the open bid. During this pre-selection period, the supplying companies present to the hospital the description of their products and their prices. After reviewing the proposals, the hospital authorizes the final selection and chooses a few companies that are considered to be most suitable. The final purchase decision is made from these selections. In the private sector, tenders are not used. Normally, private hospitals select a small number of suppliers from whom they make direct purchases. Because of these procedures, foreign and U.S. companies are encouraged to have either a Spanish distributor or their own branch in Spain.

Spain imports only new equipment. Refurbished medical equipment is allowed to be imported in Spain, but both the public and private medical providers in Spain want only new equipment. There is zero duty on medical devices. U.S. products that are competitive, new or innovative in the U.S. market have great chances of success in Spain. Spain is a free market economy whose business practices are similar to the U.S. and other EU countries. A requirement for most tenders is that the medical devices have the CE Mark. This mark became compulsory in June 1998. This requirement means that many products that had been registered in previous years in Spain when the CE Mark was nonexistent now need to be re-registered following the new EU Directive. The registration can be done in any EU country, including Spain. The registration process has been reduced from 12-14 months to 6-8 months. A positive improvement has also been regarding payments by hospitals, which in the past had taken up to 18 months, and are now 3-6 months in most cases.

As a consequence of the development of the EU market and the implementation of the CE Mark, many U.S. companies have been centralizing their manufacturing and import operations into one single country from which they register and distribute their products to the rest of the EU. This practice disguises real U.S. imports to Spain, which are credited to the EU country from where distribution takes place. The market for medical products is expected to grow at an average of 10% over the next three years. The domestic industry is growing slowly and, as a result, cannot keep pace with growing demand. Consequently, domestic suppliers' share of the market is declining.

SRI LANKA

Sri Lanka has a wide network of health care institutions, operated by the state and the private sector. The country's health sector is presently faced with new challenges due to deteriorating environmental conditions, rapidly changing life styles and demographic transition. There are 585 government hospitals providing free health care. Due to budgetary constraints, expansion of health care services in the public sector has been curtailed. Therefore, the authorities have recognized the vital role of the private sector in providing health care. There are at present approximately 160 private hospitals, but most of them are quite small and have limited facilities. There are five large private hospitals in capital Colombo. The newest addition is the Indian owned Apollo hospital, which is striving to be among the best hospitals in Asia.

As the country is totally dependent on imports for equipment and technology needs of the health sector, it presents a good opportunity for US suppliers to market medical equipment and management into the country. A reputable local agent is a must to penetrate the local market in this sector. Diagnostic equipment, operating theater equipment, intensive care equipment, clinical

analyzers and hematology equipment continue to offer the best sales prospects for US firms. US exports to Sri Lanka remained at approximately $4 million in this sector in 2001

SWEDEN

Health care is regarded as an important part of the Swedish so-called welfare system. A fundamental principle is that all citizens have the right to good health and health care on equal terms, regardless of where they live and their economic circumstances. As a result, Swedish health is by international standards relatively good. The average life expectancy for men is 76.5 years and for women 81.5 years

The factors reshaping the future health care system in Sweden are the increase in an aging population, efforts to contain cost and the influence of new technologies. U.S. suppliers, dominating the import market, enjoy a good reputation. Major third-country competitors include Germany, Denmark/Finland and the U.K. Trade sources expect the demand for telemedicine/medical informatics to show a strong increase in the next few years.

SWITZERLAND

With Europe's highest per capita income, Switzerland is an attractive, demanding market boasting one of the best health care systems in the world. The dispersed nature of its health care system, which follows the pattern of its federal structure with 26 autonomous cantons (states), contributes to the diversified market. U.S. equipment and supplies enjoy a good reputation. Many Swiss doctors and professors of medicine are trained and/or practiced in the United States. Interchange in procedures and techniques are considerable between the two countries. These factors create a strong demand for U.S. equipment and devices.

The combination of an aging population, rising living standards and new treatment methods is causing demand to grow at an above-average pace. Accordingly, as incomes rise, so does people's willingness to spend more on health services. This is reflected that Switzerland is the European leader, spending 11% of GDP on healthcare.

Soaring health care created a strong demand for home health care and outpatient devices and services. This is a field which U.S. suppliers, operating in a domestic mass market with volume production, have a market lead and often price advantages over European competitors. In addition, Switzerland’s liberal trade and investment policies coupled with a moderate fiscal policy often serves as test market for advanced medical equipment in Europe. Experiences gathered in selling medical equipment in the Swiss multilingual and educated marketplace can be translated into successes in Germany, France, Italy, Austria and other European countries.

Switzerland will continue as an excellent environment for developing new medical products and services. The average Swiss expects that hospitals should have the latest technology and, therefore, U.S.-made products that are on the cutting-edge of technology will have great potential. Prospects for U.S. advanced biomedical equipment, home health care supplies as well as diagnostics equipment are promising.

SYRIA

The demand in Syria for advanced medical equipment is growing rapidly, particularly for the supply of high-tech equipment for hospitals and universities. The Ministry of Health, (MOH) recently signed an E100 million loan agreement with the European Investment Bank (EIB), to equip 15 new 120-bed capacity public hospitals, according to European standards. Efforts are underway to equip 34 out of 63 planned new hospitals, within the next two years. The Ministry plans to expand its national facilities such that there will be one medical center for every 10,000 persons in rural areas, and one for every 20,000 in cities by the year 2020. The Ministry has also adopted measures to expand the Syrian medical industry by promoting creation of a well-trained labor force, developing standards for appropriate

medical care, and promoting administrative development with a special emphasis on the integration of information technology with medical care.

For the second consecutive year, an international exhibition for medical, pharmaceutical, dental, and laboratory equipment, and for hospital services was held June 12-16, with the participation of many European and Arabic countries. Equipment on display included: dialysis equipment, diagnostic tools such as X-ray, ultra-sound, MRI (Magnetic Resonance Imaging); CAT scanners, ECG and EEG equipment; laboratory analysis equipment; intensive care units (ICU) and monitors; laser equipment for micro surgery (laparoscopes for minimally invasive surgery) and dermatology; surgical and other instruments; cardiology equipment (color Doppler, monitors, etc.), and specialized equipment for interventional therapy (catheter, cardiac recorders, stents, etc). Disposable medical supplies (gloves, plastic tubing, sutures, needles, syringes, etc.), which are also in demand, were displayed, as well as oxygen cylinders, masks, pressure-measuring instruments, etc.

U.S. products are highly sought after, but only make-up 6-7% of total imports, largely because of price considerations. European companies have also been highly effective in marketing their products and the role of agents/distributors is important. Used medical equipment is not permitted in Syria, but reconditioned equipment that is warranted as if it is new may be imported. However, the government has recently eased these measures by allowing expatriate doctors returning permanently to Syria to bring back their used hospital and medical equipment.

TAIWAN

Recent socioeconomic advances and rapidly changing disease patterns have not only expanded the scope of health care, but have also heightened individual attention to personal health, as well. Due to limited domestic production, most advanced medical equipment must be imported, such that opportunities for U.S. suppliers of high-end medical devices are abundant and will likely remain so through the next decade. Low-end products, however, face a much more competitive market of specialized domestic manufacturers.

TAILAND

The medical device market in Thailand went down half a% in 2001, compared to 2000, but was relatively stable. This is due mainly to the government policy of providing a cheaper (30 Baht per visit) health program and the repercussions of the economic slump during 1999 and 2000. However, as a result of improvements in the Thai economy in 2001 and the adjustment of most hospitals to the realities of implementing the health plan, the medical device market is forecasted to grow at a range of 10% in 2002 and 2003. The Ministry of Public Health still remains the major end user of medical devices and accessories in Thailand as it supervises some 972 hospitals with a combined 104,296 beds and 3,000 small healthcare centers. Public hospitals are the major buyers of medical devices and supplies in Thailand. Generally, they account for approximately 60% of total purchases. Thailand's 373 private hospitals, with a combined 31,007 beds, account for approximately 40% of all sales.

Total imports dropped by 7% compared to figures for 2000, due to the 45% decrease in replacements of x-ray and radiological devices. It should be noted that the replacement cycle for this type of equipment is generally three to five years. Despite the drop in this segment of the medical equipment market, total imports for all types of medical equipment accounted for 65% of the total market. Medical devices from the U.S. are very well received and account for 34% of total imports. American manufacturers remain the leaders in introducing new technology in this field. Since most physicians in Thailand are very open to using new medical devices, U.S. suppliers should still do very well in this market in the future.

Demand for cardiovascular equipment and accessories is still high as heart disease is one of the leading diseases in Thailand. Products from the United States lead the market in this segment. The demand for orthopedic and rehabilitation equipment is also good because of the high accident rate in Thailand. However, during the same period, imports of disposable and non-disposable quick testing devices increased by 35%. This surge indicates that most hospitals stopped buying pricier capital equipment and, instead, purchased smaller testing devices that can serve the same purpose. Rapid diagnostic testing devices are increasingly recognized as an alternative for diagnostic purposes and should offer very good sales potential over the next few years.

Other products offering good prospects are disposable test kits for illegal or controlled substances, respiratory devices and oxygen therapy, dental handpieces, fillings, and accessories, as well as compatible replacement parts and accessories for various types of medical devices. Local production of medical devices in Thailand is limited to less sophisticated devices, mainly due to the infeasibility of investing in the R&D required to produce more sophisticated devices.

TURKEY

The Government's healthcare services needs to cope with a rapidly expanding population (currently about 67 million and growing by nearly two% annually). Health expenditures represent approximately 4% of GNP. The private sector is actively expanding its role in the health sector. Capital-intensive medical technologies, such as magnetic resonance imaging (MRI), computed tomography (CT), and megavolt radiation therapy will continue to be purchased by Turkish hospitals. Major suppliers are the United States, Europe, and Japan, with the United States having an excellent reputation in the medical device industry.

Demand for used, refurbished equipment (traditionally low), has increased over the last few years and is becoming an alternative supply source. Turkish import regulations permit the importation of used equipment, no more than five years old. Equipment between five and ten years old is technically subject to a 50% import duty. The importation of anything over ten years old is prohibited.

All medical equipment imports are subject to the Turkish Standards Institute (TSE) approval. USFDA approval is regarded as a seal of quality. Medical devices for sale (without restrictions) in the United States may normally be imported for sale in Turkey.

TURKMENISTAN

After the collapse of the Soviet Union, Turkmenistan inherited a health care system, which included just one pharmaceutical plant in Ashgabat that produced a few medicines (primarily iodine and analgesic pills) and several clinics and hospitals providing very poor medical services. The Turkmenderman-Adjanta pharmaceutical plant, a Turkmen-Indian joint venture, was built last year to produce annually up to 75 million capsules for 20 million injections, various ointments, medical salts, and toothpaste. A mini-plant for infusion solution production was recently commissioned and the Ashgabat pharmaceutical plant has been upgraded. The National Institute of Medicaments was recently created to develop new technology for medicament production based on raw materials available in Turkmenistan. The Institute will be fitted with laboratory equipment and other medical tools to conduct scientific research.

Siemens, a German company, built the International Medical Center in Ashgabat. Almost all other medical cure and treatment facilities existing in Turkmenistan, especially those located out of Ashgabat, require renovation and upgrading. The Government plans to build new clinics and diagnostic medical centers in each province.

UKRAINE

There are no accurate statistical data on the size of the medical equipment market. Neither the Ministry of Health of Ukraine nor any statistical agency can provide accurate figures on domestic production and imports. The size of the market can be estimated by examining customs and tax reports.

The majority of the Ukrainian health care system is still state-owned, and is financed from the state budget. Ukraine's National Health Service is now in the process of being restructured to incorporate modern methods and higher levels of medical assistance. A long awaited health insurance reform is expected in the near future. The restructuring of the medical care system may be a very good target for technical assistance funds, which in turn may eventually help to develop a real market for medical supplies.

Medical equipment traders are prime contacts for U.S. businesses entering the Ukrainian market, due to their extensive networks and ability to identify buyers. The major purchasers of medical equipment are state-owned regional and "vidomichi" (departmental) hospitals, the latter owned by various ministries and enterprises. The potential for private hospitals has been increasing.

Best sales prospects for U.S. exporters include: laboratory equipment, radiographic units, electro-medical equipment, dental equipment, laser surgery devices, sterilization devices, diagnostic systems and disposable items. Some medical equipment is produced in Ukraine, but production is not competitive on a global scale.

The market potential for laboratory equipment (i.e. centrifuges, ultracentrifuges, spectrophotometers, nuclear counters, and blood grouping systems) is high in Ukraine. Opportunities exist for electro-medical equipment and dental equipment (i.e. complete workstations, dental syringes, needles and laboratory products). Modern equipment offering ease of use and cost savings is required in the fields of microsurgery, radiology and biomedicine.

Receptivity to used medical equipment is lukewarm. Ukrainian purchasers are often not familiar with U.S. medical equipment, and wonder about its operational life span. However, a potential market for used medical equipment does exist, with the recommended approach being the creation of a joint venture.

UNITED ARAB EMIRATES

UAE has seen remarkable progress in health care and comprehensive health programs have been adopted to meet the needs of UAE society. Currently the UAE has a comprehensive, government-funded health service and a developing private health sector. The Ministry of Health (MOH) budget has increased from $274 million in 1991 to $435 million in 2002 with an average increase of 5.2% per year. The MOH spends approximately 1.5% of its annual budget on treatment abroad. Approximately 5.5% are spent on medical machines, tools and supplies.

Health care infrastructure has kept pace with other health care developments to ensure that adequate services are provided in the Emirates. In 1971, there were only seven hospitals and 700 beds in the UAE. By year 2001 the number of hospitals had risen to 51, the number of physicians had also risen to 1,535 and nursing staff to 4,664. The number of clinics and health centers had also increased from 21 to 115 well-equipped modern centers. Twenty-five of the hospitals with 3,260 patient beds are run by the MOH. Four hospitals with 1,236 beds are run by the General Authority for Health Services for Abu Dhabi. Another four hospitals with 1,524 beds are run by Dubai's Department of Health and Medical Services. The Department of Defense runs 4 hospitals. Moreover, there are three private non-profit hospitals with 148 beds, twenty-one privately owned hospitals with 827 beds, 1019 privately owned clinics, and 1 hospital with 36 beds run by Abu Dhabi National Oil Company.

The Government plans for expansion and upgrading of its health care system is ongoing. The construction of 17 public hospitals including extensions to existing hospitals will add 1,800 beds in various medical outlets and nearly doubling the bed capacity of public hospitals in the UAE over the next 10 years. The MOH has actually allocated $58 million from its 2002 budget for new projects that include health centers, hospitals, a cardiology center, a dentistry center, and upgrading of current hospitals facilities and service. Moreover, the MOH has granted licenses for the establishment of five new private hospitals in Abu Dhabi and Al Ain with a capacity of 250 beds.

The UAE Government provides its nationals with a relatively free healthcare system administered by its Federal Ministry of Health. For expatriates, which currently comprise 80% of the population a payment of $82 per year is required to obtain health cards, which entitles the holder to relatively free medical services at all MOH facilities. The health card is a mandatory requirement for each expatriate and without it expatriate workers will not get a work permit in the UAE. Temporary visitors to the UAE were also able to get free health services during their stay in the UAE. These costs comprise of approximately 80% of the MOH budget.

The MOH spends annually on medical services five times more that what it collects in medical fees it. In lieu of the above and to ease its burden, the MOH decided that its clinics will no longer provide medicines to expatriate cardholders, but they will have to purchase them from private pharmacies. It also decided that visitors to the UAE and residents without health cards or with expired ones would have to pay fees for hospital beds and surgical operations. In fact, just recently the UAE Cabinet approved a memorandum of understanding by MOH, which obligates all federal and local ministries and departments, as well as the private sector to insure their employees, nationals and expatriates, with recognized insurance companies. These new policies would effectively reduce the government's role in offering subsidized healthcare, as well as abolish the current health card system for expatriates.

The Health insurance business will grow by at least a 1000% for two or three years compared to about 30% now. There are few insurance companies that provide comprehensive medical insurance in the UAE. Major players are: Alico, Alliance Insurance, National General Insurance, BUPA Health Service, HealthNet, and Al Sagr National Insurance Co, which has recently won a big contract in association with Nextcare from Etisalat covering more than 22,000 beneficiaries. Insurance companies interested in operating in the UAE are recommended to review Chapter 6 of this guide.

In 2001, the UAE market for medical equipment and supplies was estimated at $390 million with US imports accounting for 28% of total. Major US imports are diagnostic, therapeutic and patient monitoring equipment perceived to be high technology and state of the art. US medical equipment and supplies as well as healthcare technology and services are considered of high reliability and are preferred. The US commands a major market share with regards to imaging and monitoring equipment, ventilators, and life support and operating theater equipment. Local production accounts for only 6.7% of the market for medical and pharmaceutical supplies. 3% of imports and locally produced medical supplies are re-exported. Besides the US, the UAE imports medical equipment and pharmaceuticals from France, Germany, Italy, UK, Italy, Sweden and Japan. Companies that wish to export medical equipment to the UAE are required to have a local agent registered with the MOH. Medical equipment carries a 4% import duty.

The MOH, in addition to introducing new services and building new hospitals, is moving towards privatizing hospital management in a number of government run hospitals. The General Authority for Health Services (GAHS) is the new entity, which is currently managing 4 hospitals with near-future plans to manage all of Abu Dhabi's Hospitals. GAHS is heading towards privatizing the management of all hospitals under its authority. In fact, one of its hospitals, Khalifa

Medical Center a new 325-bed, is being managed by Inter-Health Canada. Al Conrnich Maternity Hospital, which is also a GAHS hospital, is being managed by a UK firm, Allied and the contract is due for re-bid.

UNITED KINGDOM

The $3.7 billion UK medical equipment market ranks as the world's sixth largest and Europe's fourth largest. The U.S. is the largest import supplier, with U.S.-origin medical equipment and devices accounting for almost one quarter of the domestic market. In addition, most large U.S. medical equipment manufacturers have established operations in the UK.

The principal purchaser of medical equipment in the UK is the National Health Service (NHS) – the UK's public sector health care system –, which accounts for over 75% of the UK's health care provision. The NHS budget has been increased by 35% through 2005, to enable the purchase of capital equipment such as IV pumps, lasers, imagery systems, pathology laboratories and hospital bed systems. Although the private sector accounts for less than one-quarter of the UK health care market, significant opportunity exists for U.S. medical device companies supplying private hospitals and the residential, nursing, and home care sectors.

Medical devices are regulated by EU Directives that set out compliance requirements and procedures. The three main Directives are the Medical Devices Directive, the Active Implantable Medical Devices Directive, and the In-Vitro Diagnostic Medical Devices Directive (**www.medical-devices.gov.uk)**. In addition, there are concerns that the UK National Institute of Clinical Excellence (NICE), which judges the clinical and cost-effectiveness of new and existing medical devices, and which provides the NHS with guidance on treatment strategy, may present an additional regulatory hurdle that innovative U.S. devices must overcome (**www.nice.org.uk)**.

VIETNAM

Over the past years, Vietnam's health care system has achieved notable progress in modernizing and upgrading its facilities. However, the industry is still underdeveloped, with hospitals that are overcrowded and poorly equipped. There is strong demand for imaging, diagnostic, laboratory, operating, intensive care and monitoring equipment. But most health care facilities have low purchasing power due to the very limited government appropriations for medical equipment.

The total number of hospitals in Vietnam is approximately 837, with about 45,000 beds (for a population of 80 million). Most of these hospitals are publicly owned and in desperate need of modern equipment. There are six foreign-invested hospitals and polyclinics, and ten private hospitals across the country. In addition, there are 19,836 private health care clinics (many run by hospital staff doctors during their off-duty hours), 7,015 traditional medicine centers, 3,432 specialized clinics, and 550 family-planning clinics.

From 1997 to 2001, the Government spent more than $ 1 billion on health care initiatives. Of that, some $150 million was spent on importing new medical equipment and about $29 million was for upgrading medical equipment in specialized health care centers. 80% of the total expenditures were funded from outside sources, primarily Official Development Assistance (ODA). The other 20% came from the State budget. The Government has issued another five-year plan to upgrade medical equipment, develop hi-tech centers nationwide, and increase the number of skilled medical personnel.

The best prospects for equipment sales are: 1) medical imaging equipment, 2) intensive care and monitoring equipment, 3) operating theater equipment, 4) equipment for treating cardiac and asthmatic conditions, and 5) diagnostic and laboratory equipment.

Vietnam has some small local manufacturers, primarily engaged in fabricating furniture and simple equipment, such as hospital beds, surgical instruments, and disposable medical supplies.

Shimadzu Vietnam (Japan) is the only joint venture producing X-ray equipment.
The medial equipment market relies on imports. Japan and Germany are the two major suppliers in Vietnam. Each country enjoys about 30% of the market. International competitors include Siemens, Phillips, Hitachi and Shimadzu. Although product prices tend to be 15%-20% higher, U.S. made equipment has the advantage of reputation, advanced technology, and reliable after-sales service.

U.S. suppliers lead the market for several types of equipment including: respirator equipment, X-ray and CT scanners, laboratory equipment, OB/GYN and anesthesia equipment, etc. Many U.S. brands are "household names" in the industry.

There are two major markets, Hanoi and Ho Chi Minh City. State owned hospitals, clinics, and health care centers purchase the bulk of medical equipment, representing 80% of the market. Foreign owned hospitals, medical universities and research, and private clinics are other buyers of medical equipment. However, foreign-invested private hospitals both newly opened and under development promise to offer the best facilities in Vietnam and therefore, the best market opportunities.

The Government’s liberalization policies aim to foster the development of privately owned hospitals, which represents a new trend and potential for medical equipment supply. To date, the number of private hospitals has grown from six in 1999 to ten in 2001. They average around $2 million in invested capital. Private hospitals are more open to purchasing new equipment and employing advanced techniques that will allow them to differentiate themselves in the market.

Vietnam has 15 foreign-invested hospital and clinic projects, with combined capital of $195.4 million. Major projects include the Hanoi-based Eukaria Vietnam project worth $28.5 million and the Far-East Medical Vietnam Ltd.'s Franco-Vietnamese hospital in Saigon South, the largest foreign-invested hospital in Vietnam, which recently received a loan of $21.5 million from the World Bank.

Other major projects in the planning stages include High-Tech Medical Centers Zones. These advanced and specialized health-care facilities will be developed in Hanoi, Ho Chi Minh City, and the Central region. Ho Chi Minh City has begun developing the first ever high-tech medical park designed to provide advanced medical diagnosis and treatment. It also includes medical training facilities. These projects are potential for U.S. export of medical equipment.

YEMEN

Yemen's Ministry of Public Health cannot cope with increasing demand for modern health services, so it has encouraged the private sector to establish hospitals and clinics. Statistics indicate that Yemen has over 107 government hospitals, 210 private hospitals, over 760 health care centers and clinics, and 3,000 drug stores, representing a significant market. Yemeni expatriates and businessmen are planning to invest in larger hospitals. More than 60 private companies are importing and trading in medical instruments, supplies, and pharmaceuticals. Yemen has one public pharmaceutical manufacturing company (which was to be privatized) and three private pharmaceutical manufacturing companies have been established since 1998. As a result, demand for pharmaceutical raw materials
is also increasing.

IV. TRADE EVENTS
MEDICAL EQUIPMENT & SUPPLIES

Trade events, such as trade shows, trade missions and catalog shows, offer excellent opportunities for face-to-face interaction with foreign buyers and distributors. Of the many U.S. and international events held throughout the year, some are vertical (single industry theme) and some horizontal (many industries represented). The events organized or approved by the U.S. Department of Commerce can be especially useful for first-time or infrequent participants – they require less lead time to register and typically involve more handholding.

The Trade-Event Scheduling Web sites listed below allow selective searches for upcoming events by industry, location, type and date. They typically provide the event organizer, event descriptions and costs, and people to contact for more information.

To find upcoming events for Medical Equipment, use industry search terms relating to Medical, Dental, Orthopedic, X-Ray, etc.

Schedules for U.S. Government Organized or Sponsored Events

Domestic USDOC Events: **http://www.export.gov/comm_svc/us_event_search.html**

International USDOC Events: **http://www.export.gov/comm_svc/intl_event_search.html**

USDA (Food & agriculture) Events:
http://www.fas.usda.gov/scripts/agexport/EventQuery.asp

Schedules for Commercially Organized Events

Expo 24-7 (**http://www.expo24-7.com/default.asp**)
TSNN (**http://www.tsnn.com/**)
ExpoWorldNet (**http://www.expoworld.net/**)
Exhibition Center - Foreign Trade Online (**http://www.foreign-trade.com/exhibit.htm**)

V. AVAILABLE MARKET RESEARCH
MEDICAL EQUIPMENT AND SUPPLIES

All the reports listed below are in-depth, country-specific surveys of the market for a specific industry sector or sub-sector, written by U.S. commercial staff in these countries. Each report analyzes demand trends, the competition, business practices, distribution channels, promotional opportunities, and trade barriers.

All the reports can be obtained in print or on disk from:

CENTER FOR INTERNATIONAL TRADE DEVELOPMENT
13430 Hawthorne Blvd, Hawthorne, California 90250 USA
Phone: (310) 973-3173 Fax: (310) 973-3132 E-mail: **info@elcamino.citd.org**

Orthopedic And Orthotic Equipment	**Argentina**	**1/27/2003**
Laboratory And Scientific Equipment	**Argentina**	**11/8/2001**
Medical Equipment	**Argentina**	**10/19/2001**
Medical Research Capabilities In Biotechnology	**Australia**	**5/11/2002**
Medical Equipment: Health Aids To Daily Living	**Australia**	**6/14/2001**
Complementary Health Care Market	**Australia**	**2/1/2001**
Dental Equipment	**Australia**	**1/22/2001**
Electromedical Equipment	**Austria**	**10/1/2002**
Biotechnology For Medical/Pharmaceutical Applications	**Austria**	**9/28/2001**
Medical Equipment Market: U.S Business Development Opportunities	**Azerbaijan**	**2/6/2002**
Acceptability Of GMO Products	**Belgium**	**1/27/2003**
Biotech Applications For Pharmaceuticals	**Belgium**	**9/26/2001**
Medical Devices	**Brazil**	**8/21/2002**
Electro-Diagnostic Equipment	**Canada**	**8/22/2002**
Telehealth/Telemedicine	**Canada**	**7/31/2001**
Medical Equipment	**Chile**	**9/27/2001**
Specific Cardiac Products In Southwest China	**China**	**9/14/2002**
Medical Device Market Overview	**China**	**8/5/2002**
Pharmaceutical Market In China	**China**	**7/31/2001**
Marine Survey And Ocean Sensor Equipment In China	**China**	**7/28/2001**
Pharmaceutical Manufacturing Equipment	**China**	**6/5/2001**
Medical Equipment (Telemedicine)	**Colombia**	**6/16/2001**

Drugs And Pharmaceuticals	**Costa Rica**	**5/10/2001**
Medical/Electro Medical Equipment	**Denmark**	**8/28/2002**
Biotechnology With Medical Application	**Denmark**	**7/3/2001**
Electromedical Equipment	**Dominican Republic**	**10/1/2002**
Dental Equipment And Supplies	**Ecuador**	**3/28/2001**
Respiratory And Pulmonary Equipment	**Egypt**	**10/18/2002**
Health Care Services	**Egypt**	**5/1/2001**
Medical Equipment	**Finland**	**8/31/2002**
Biotechnology	**Finland**	**9/29/2001**
The Medical Equipment Market	**France**	**9/28/2002**
Biotechnology Health Care Market	**France**	**6/12/2002**
Medical Devices	**Germany**	**8/14/2002**
Biotechnology - National Developments In A European Context	**Germany**	**1/4/2002**
Medical Equipment	**Greece**	**1/27/2003**
Medical Equipment	**Greece**	**7/28/2001**
Drugs And Pharmaceuticals: Vitamins/Nutritional Supplements	**Guatemala**	**9/27/2002**
Pharmaceuticals	**Hong Kong**	**1/16/2002**
Pharmaceutical And Medical Products	**Hungary**	**10/29/2002**
Medical Equipment	**Hungary**	**2/15/2002**
Diagnostics	**Hungary**	**9/1/2001**
Laboratory Scientific Instruments	**India**	**1/23/2003**
Cancer Diagnostic And Treatment Equipment	**India**	**4/28/2001**
Laboratory Equipment - Biotechnology	**Indonesia**	**10/22/2001**
Medical Equipment And Supplies	**Indonesia**	**7/10/2001**
Laboratory Instruments & Apparatus	**Israel**	**10/8/2002**
Home Healthcare Products	**Israel**	**5/24/2002**
In Vitro Diagnostic (Ivd) Products	**Israel**	**6/21/2001**
Electromedical Equipment	**Italy**	**8/23/2002**
Biotechnology	**Italy**	**10/31/2001**
Healthcare Services/Tele-Medicine	**Italy**	**10/31/2001**
Biotech Opportunities	**Japan**	**1/28/2003**

Pharmaceuticals Market	**Japan**	**8/14/2002**
Analytical Instruments (Carryover From 01)	**Japan**	**2/6/2002**
Health Care Services	**Japan**	**1/22/2002**
Medical Devices	**Japan**	**1/22/2002**
Medical Equipment	**Jordan**	**8/5/2002**
Healthcare Services	**Kazakhstan**	**6/22/2001**
Medical Equipment	**Kenya**	**10/17/2001**
Pharmaceuticals	**Kenya**	**10/17/2001**
Medical Equipment & Supplies	**Kuwait**	**7/29/2001**
Nutritional Supplements, Nutraceutical, Herbal Medicines	**Malaysia**	**8/29/2002**
Healthcare Sector Overview	**Malaysia**	**9/26/2001**
Clinical Diagnostic Products	**Mexico**	**10/1/2002**
Drugs And Pharmaceuticals	**Mexico**	**6/20/2002**
Medical Equipment	**Mexico**	**9/29/2001**
Opportunities For Biotechnology In Health Care	**Netherlands**	**8/4/2001**
Medical Equipment	**New Zealand**	**1/9/2003**
Medical Equipment	**Norway**	**9/27/2002**
Biotechnology For Medical/Pharmaceutical Applications	**Norway**	**10/18/2001**
Biotechnology For Medical/Pharmaceutical Applications	**Norway**	**10/18/2001**
Pharmaceutical Raw Materials	**Pakistan**	**5/29/2001**
Health Care Services	**Pakistan**	**1/20/2001**
Cardiology And Surgical Equipment	**Philippines**	**10/1/2002**
Radiology Equipment	**Philippines**	**8/21/2002**
Radiology Equipment	**Philippines**	**6/19/2002**
Pharmaceuticals	**Philippines**	**7/10/2001**
Optical Instruments	**Philippines**	**3/30/2001**
Market For Medical Device Payment/Reimbursement	**Poland**	**1/10/2003**
Dental Equipment	**Poland**	**8/5/2002**
Pharmaceuticals	**Poland**	**1/20/2001**
Medical And Electromedical Equipment	**Portugal**	**7/3/2002**
Biotechnology For Medical/Pharmaceutical Applications	**Portugal**	**6/22/2001**
Drugs And Pharmaceuticals	**Romania**	**8/14/2002**
Medical Equipment	**Romania**	**5/8/2002**
Outstanding Diagnostic	**Romania**	**3/7/2001**

Dental Equipment And Supplies In Northwest Russia	**Russia**	**8/14/2002**
The Medical Equipment Market	**Russia**	**8/5/2002**
Medical Waste	**Saudi Arabia**	**5/27/2002**
Drugs And Pharmaceutical Products	**Saudi Arabia**	**12/10/2001**
Geriatric Healthcare Services	**Singapore**	**8/30/2002**
Health Supplements	**Singapore**	**11/1/2001**
Biotechnology	**Singapore**	**6/7/2001**
Health Care Services	**South Africa**	**10/1/2002**
Broadcast & Recording Equipment	**South Africa**	**8/24/2001**
Cardiac Device Market	**South Korea**	**8/9/2001**
Medical Information Technologies	**South Korea**	**9/6/2002**
Prosthesis/Trauma	**Spain**	**10/10/2001**
Biotechnology With Medical Applications	**Spain**	**8/2/2001**
Medical Equipment	**Spain**	**7/13/2001**
Orthopaedic Equipment	**Sweden**	**2/18/2003**
Medical Equipment	**Sweden**	**9/24/2002**
Bioinformatics	**Sweden**	**8/14/2002**
Biotechnology - Medical	**Sweden**	**10/3/2001**
Biotechnology With Medical Applications	**Switzerland**	**1/10/2003**
Medical Equipment	**Syria**	**1/9/2002**
Signal Generators	**Taiwan**	**1/10/2003**
Electrical Test & Measuring Instruments	**Taiwan**	**8/14/2002**
Orthopedic Equipment	**Taiwan**	**7/4/2002**
Biotech Technology Transfer	**Taiwan**	**3/19/2002**
Cardiological Equipment	**Taiwan**	**10/27/2001**
Analytical Instruments	**Taiwan**	**5/16/2001**
Vitamins And Nutritional Foods	**Thailand**	**1/24/2003**
Cardiovascular Devices	**Thailand**	**8/20/2002**
Healthcare Products	**Thailand**	**3/8/2001**
Surgical And Anesthesia Equipment	**Turkey**	**1/27/2003**
Medical & Surgical Products	**Turkey**	**9/27/2002**
Bio-Technology With Medical Applications	**Turkey**	**10/26/2001**
Medical Equipment	**United Arab Emirates**	**10/3/2001**

The Medical Equipment Market	**United Kingdom**	**9/14/2002**
The Nutraceuticals Market	**United Kingdom**	**9/11/2002**
Biotechnology With Medical Applications	**United Kingdom**	**9/27/2001**
Medical Diagnostic Equipment	**Vietnam**	**1/31/2002**
Medical Equipment	**Vietnam**	**2/1/2001**
Pharmaceuticals - (Ssr)	**West Bank**	**2/26/2001**